



2022

KCS Contractor Training

INSTRUCTOR GUIDE



2022 KCS Contractor Training Instructor Guide

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**Welcome to
the
2022 KCS
Contractor
Training
Instructor
Guide**



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KCS strives to consistently be the fastest-growing, best-performing, most customer-focused transportation provider in North America.

kcsouthern.com

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Getting Started

About This Guide

This Instructor Guide provides a master reference document to help you prepare for and deliver the KCS Contractor Training 2021 program.

What will I find in the guide?

This Instructor Guide is a comprehensive package that contains:

- The program delivery sequence
- Presentation topics and key points to cover, and
- Instructions for managing activities and other instructional activities

Program Overview

This program is designed for independent contractors and their employees who provide inspection, construction, maintenance and related services for KCS, or who may engage in work activities on KCS property in close proximity to active railroad tracks.

Program Purpose

This program provides Safety and Roadway Worker compliance training for all KCS contractors working on the KCS right-of-way.

Program Length

This program can be delivered in approximately four hours.





Discussion Points

Here are a few suggestions that some experienced trainers use to make classes more enjoyable and meaningful to the audience.

- Unless the class participants already know one another and are known to you, take a moment after the safety briefing to have each class member introduce themselves. Typically, this introduction might include their name, their employer and perhaps a brief overview of their experience in the railroad industry.
- Look for opportunities to involve everyone in the class, including simple things such as requiring each one in turn to answer a



- question in the module review.
- Ask questions that stimulate discussions and give you feedback regarding the knowledge level of the class participants.

- Use personal experiences as appropriate to illustrate certain points (but don't make the class all about you).

- Don't be afraid to be repetitive about key matters.

- Provide current information relevant to the training such as recent injuries, Federal fines, FRA audits, etc.

- Get feedback from students at the end of the course.

- Instruct to the least experienced student.

- Remind students that understanding of and compliance with railroad safety rules is essential.



Materials

This is the list of class materials you will need to successfully teach this course:

- Training Record (Class sign in sheet is provided separately)
- 2022 Contractors Handbook for KCS Roadway Worker Protection for each participant
- 2022 Contractor Safety and Roadway Worker Protection Instructors Guide (for instructor only)
- 2022 Contractor Safety and Roadway Worker Protection Student Workbook
- Final Examination Booklet and Answer Sheet for each participant. (Master Copies of the examination and answer key are provided separately)
- Approved certification forms

Instructor Key

Throughout this guide, you will see these cues to help you through the program.

INSTRUCTOR:

You will be teaching and talking to the class

CLASS DISCUSSION

You will lead a group discussion with the class, ensuring that everyone stays on topic.

COMPUTER INTERACTION

You will need to click on and interact with the program. There are specific instructions each time you see this.

VIDEO

You will introduce and play a video.

ANIMATION

You will click to play an animation. There are specific instructions each time you see this.

REVIEW Q & A

You will lead the module reviews with the class.



Preparing the Sign In Sheet and Other Master Documents

Make sure the sign in sheet is printed and ready before your class begins.

Step 1: Open the “2022 KCS Master File” on the USB drive.

After opening the file, you should be on the “**Instructions**” tab. Read the Instructions carefully before proceeding.

Step 2: Open the “**Template**” tab. *Please note that all data that you enter will be entered on the Template Tab.*

Step 3: Enter data as indicated in each of the highlighted areas on the “**Template**” sheet.

Step 4: After completing Step 3, save the file with a new file name by selecting “File” in the Toolbar, then “Save As”, and enter a new file name to be used for this class file. (We recommend using the date of training as the file name, i.e. “Class 012422” for a class conducted on January 24, 2022. Each class file should be saved with an individual, unique file name)

Step 5: Open the “KCS Sign-In” sheet by selecting the “KCS **Sign-In**” tab. *This sheet will have been pre-populated with the information that you entered in Step 3 above.*

Step 6: Print this Sign-In form prior to the class and instruct the class participants to sign-in upon their arrival for class in order to document ACTUAL attendance.

KEY TO NOTE

**RailPros requires you confirm student identity by government issued documents such as:*

- Drivers License
 - Passport
-

Starting the Program

To run the KCS 2021 Contractor Training Program:

Step 1: On your computer desktop, right click and click on "New Folder".

Step 2: Name the folder "2022 KCS RWP Training"

Step 3: Plug in the USB that was provided to you.

Step 4: Right click on the zipped folder named "KCS Roadway Working Training" and click on "Extract All"

Step 5: Click browse for your new folder named "2022 KCS RWP Training" on your desktop and select that folder.

Step 6: Click Extract

IMPORTANT: *Do not move or rename files prior to or after being extracted.*

To Launch the program:
Click on the file named 'story.html'



IMPORTANT:
Chrome Browser will work best for playback.



Instructor Welcome

Welcome to the 2022 KCS Contractor Training Course presented by RailPros.

Introduce yourself:

- Name
- Years working on the railroad
- Background

Before we begin:

This training meets the requirements of FRA Regulation (49 CFR 214.343 Subpart B) and KCS for annual Roadway Worker training.

The rules outlined and covered in this course are pulled directly from the following three rules manuals:

- 2020 KCS On-Track Safety & Roadway Worker Rules & Maintenance of Way/Signal Department Rules
- 2020 KCS General Safety Rules
- GCOR, The General Code of Operating Rules, 8th Edition

We'll refer to these documents as the ***On-Track Safety Manual.***

The minimum requirements for Roadway Worker Protection are established by the federal government. The Federal Railroad Administration (FRA) requires each Railroad to have an approved Roadway Worker Protection Program document.

Each roadway worker responsible for On-Track safety of others, such as the Roadway Worker in Charge, or RWIC, and Lone Workers, must have a copy of this manual accessible while on duty.

FRA regulation 49 CFR 214 applied to all railroads and all contractors, and their employees who are roadway workers. Fines for non-compliance can be levied against railroad employers and contractor employees and/or their employees. These fines range from \$1,000 to \$20,000.

Training Records must be maintained for six years after successful completion of this KCS Contractor Training program. Independent Contractors and employers who provide services of Roadway Workers must maintain written or electronic records documenting Roadway Worker Qualification. According to the FRA, each record must include:

- Name of the employee/contractor
- Type of qualification (i.e: "KCS Roadway Worker Protection Program")
- Most recent date of qualification



Course Overview:

- Introduction Module
- Module 1: Personal Protective Equipment
- Module 2: Communication
- Module 3: Job Safety Briefings
- Module 4: Working On or Near Tracks
- Module 5: On-Track Safety
- Module 6: Roadway Maintenance Machines
- Module 7: Positive Train Control

Each module will end with review questions. The program will conclude with a 20-question multiple choice examination.

Course Completion:

Successful completion of this course requires a passing grade of **85%** and is mandatory for all independent contractors and employees of contractors before they can perform services as roadway workers on KCS railroad property.

**This course does not qualify a participant to obtain Working Limits, be a Lone Worker, a Watchman/ Lookout or Equipment Operator. These duties require additional training separate from this program.*

Conditions not covered by the program demand the exercise of sound judgment to maintain safety of roadway workers. Past practices not conforming with this program are unacceptable as an excuse for non-compliance



INTRODUCTION

INSTRUCTOR

Safety is of the first importance in the discharge of duty. Our first step is keeping everyone here safe today, so we'll begin with our own job safety briefing.

Slide One

As we go through each box, fill in the appropriate information from your class's job briefing in your student workbook.

CLASS DISCUSSION

Worker Protections are established by the federal government. The Federal Railroad Administration (FRA) requires each Railroad to have an approved Roadway Worker Protection Program document.

- Location:*
- Emergency Exits:*
- 911 Caller:*
- Nearest Hospital:*
- Fire Extinguisher: Yes | No*
- First Aid Kit: Yes | No*
- CPR qualified:*
- AED: Yes | No*
- Hazards:*
- Special Medical Concerns:*

COMPUTER INTERACTION

Click on the white space ahead of each colored box OR the play button to make the next box appear on the screen.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

Safety is of the first importance in the discharge of duty.

Slide Two

CLASS DISCUSSION

Be mindful of the classroom environment. Be sure to adhere to the following rules.

COMPUTER INTERACTION

Click on the white space ahead of each colored box OR the play button to make the next box appear on the screen.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

Classroom Rules:

- Be on time
- Participate
- Stay on task
- Listen
- Respect others' opinions
- Ask questions
- Turn off or silence cell phones



Slide Three

INSTRUCTOR

Roadway Worker Responsibilities:

As a roadway worker, you have specific responsibilities. Lives depend on everyone knowing and following these rules. We'll start by watching a video that discusses these responsibilities.

VIDEO

Click on the play button in the middle of the video to play video.

You can also click the black play button on the progress at the bottom.

If needed, you have the ability to scrub through the progress bar once the video has played through once fully.

KCS On-Track Safety and Roadway Worker Rules

22.0 RESPONSIBILITY OF ALL ROADWAY WORKERS

22.1 Follow On-Track Safety Rules

When it is impracticable for the on-track safety manual to be readily available to a lone worker, the employer shall establish provisions for such worker to have alternative access to the information in the manual.



Slide Three *(continued)*

Changes to the on-track safety manual may be temporarily published in bulletins or notices. Such publications shall be retained along with the on-track safety manual until fully incorporated into the manual.

Roadway workers (and contractors who are roadway workers) whose duties are subject to 49 CFR Part 214, Subpart C, "Roadway Worker Protection," must familiarize themselves with all requirements of the KCS On-Track Safety Program, including (but not limited to) the following:

- A. Roadway workers must study the On-Track Safety Rules, know and understand their application, practice them while on duty or on company property, notify a co-worker immediately if they are not complying with a rule and do everything possible to prevent accidents and injuries.
- B. Roadway workers must comply with the rules and instructions provided for on-track safety.
- C. All Roadway workers must ensure that they receive a job briefing.
- D. Roadway workers must not perform any work that will interfere with the safe passage of trains. Roadway workers may not accept an assignment to perform the duties of a roadway worker until trained in on-track safety procedures for the assignment to be performed and have demonstrated the ability to fulfill the responsibilities for on-track safety that are required of a roadway worker performing that assignment.



Slide Three (continued)

Each roadway worker is responsible for:

- Complying with roadway worker protection rules;
- Ensuring that On-Track Safety is being provided before fouling a track
- Not fouling a track except when necessary in the performance of duty.

The Kansas City Southern RWP Program applies to all Roadway Workers, including Company employees and Contractor employees, whose duties may require them to foul a track. This KCS RWP program has been designed to promote the effectiveness of and compliance with roadway worker protection safety rules.

27.0 GENERAL TRAINING AND QUALIFICATION OF ROADWAY WORKERS

27.1 Responsibility of Employer

The KCS Railway Company will not assign a Roadway worker to perform the duties of a Roadway worker unless that Roadway worker has received training in the on-track safety procedures for the assignment to be performed, and the Roadway worker has demonstrated the ability to fulfill the responsibilities for on-track safety that are required of a Roadway worker performing that assignment. Contractors will be responsible for the training of their Roadway workers in an approved KCS on-track safety rules and procedures program once per calendar year.

COMPUTER INTERACTION

Click on the white space ahead of each colored box OR the play button to make the next box appear on the screen.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.



Slide Three (continued)

27.2.1 Proof of Qualifications

- A. Proof of Qualifications for all KCSR Engineering employees shall be verified through the KCSR electronic records management system, i.e. People Station.
- B. Contractor employees are required to provide Proof of Qualifications by possessing a Rules/Training card.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

27.3 Frequency of Training

The KCS Railway Company will provide all its Roadway workers who are roadway workers with training in on-track safety rules and procedures once each calendar year. Contractors will be responsible for the training of their Roadway workers in an approved KCS on-track safety rules and procedures program once each calendar year.

NOTES:



Map of KCS lines

It is important to be familiar with areas of track you may be working on. This map showcases where your work may be along KCS lines.

KCS primary US subsidiary is the KCS Railway Company serving the central and South Central United States. We are the smallest of the 7 Class-1 Railroad in the United States.

Our Mexican Subsidiary, KCS de Mexico, serves North Eastern and Central Mexico and Port Cities of Lazaro Cardenas, Tampico, and Veracruz.

KCS also owns a 50% interest in the Panama Canal Railway Company providing ocean to ocean freight and passenger services along the Panama Canal.



Headquarters:
Kansas City, Missouri



Slide Four

Map of KCS lines

KCS Headquarters is in Kansas City, Missouri and strives to consistently be the fastest-growing, best-performing, most customer-focused transportation provider in North America.

KCS' primary US subsidiary is the KCS Railway Company serving the central and South-Central United States. We are the smallest of the 7 Class-1 Railroad in the United States.

VIDEO

This video will play automatically and has no audio.

Our Mexican Subsidiary, KCS de Mexico, serves North Eastern and Central Mexico and Port Cities of Lazaro Cardenas, Tampico, and Veracruz.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

KCS also owns a 50% interest in the Panama Canal Railway Company providing ocean to ocean freight and passenger services along the Panama Canal.



KCS Critical Incident Desk Phone Number

*Use this number for any emergency
that you might see*

877-527-9464



Slide Five

COMPUTER INTERACTION

*Click on each term
to display the definition.
This will bring you
to a new screen.*

*To return to the original
page with the list of key terms,
click "close" at the top right.*

Key Terms

There are key words you must know before going to work on KCS Property.

On-Track Safety

The entire set of on-track safety rules and instructions maintained together in one manual designed to prevent roadway workers from being struck by trains or other on-track equipment. These instructions include operating rules and other procedures concerning on-track safety protection and on-track safety measures.

Roadway Worker – You are a Roadway Worker!!

Any Roadway worker of a railroad, or of a contractor of a railroad, whose duties include inspection, construction, maintenance or repair of railroad Track, bridge, roadway, signal, and communication systems, electric traction system, roadway facilities or Roadway Maintenance Machinery on or near Track or the potential of Fouling a Track, and Flagmen and Watchmen/Lookouts as defined in this program.

Roadway Work Group

Two or more Roadway Workers organized to work together on a common task.



Slide Five (continued)

Roadway Worker in Charge

A roadway worker who is qualified to establish on-track safety for roadway work groups, and lone workers qualified to establish on-track safety for themselves. You may also notice that the roadway worker in charge (RWIC) is sometimes referred to as an employee in charge (EIC). These terms can be used interchangeably.

Fouling a Track

The placement of an individual or an item of equipment in such proximity to a track that the individual or equipment could be struck by a moving Train or on track equipment, or in any case within four feet of the field side of the near running rail.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

NOTES:

Slide Six

INSTRUCTOR

This is a static slide. You will need to discuss the zero-tolerance policy KCS has when it comes to drugs and alcohol.

Drugs and Alcohol

▶ ***KCS has a zero-tolerance policy when it comes to drugs and alcohol.***

GCOR Rule 1.5 states:

Use or possession of alcoholic beverages while on duty or on company property is prohibited.

Employees must not have any measurable alcohol in their breath or bodily fluids when reporting for duty, while on duty or while on company property.

Use or possession of intoxicants, over the counter or prescription drugs, narcotics, controlled substances,

or medication that may adversely affect safe performance is prohibited while on duty or on company property, except medication that is permitted by a medical practitioner and used as prescribed.



Employees must not have any prohibited substances in their bodily fluids when reporting for duty, while on duty or while on company property.

COMPUTER INTERACTION

Click "Next" at the top right to advance to the next slide.



INTRODUCTION REVIEW Q & A

**Read these questions out loud to the class. Answer and discuss together.
ANSWERS ARE HIGHLIGHTED IN BOLD.**

1. Who is required to have a copy of the On-Track Safety Manual accessible (paper or electronic) while on duty:
 - a. Each roadway worker responsible for the on-track safety of others (RWIC)
 - b. Each Lone Worker
 - c. The FRA Inspector
 - d. All Roadway workers**

2. Each roadway worker has specific responsibilities on the KCS. Among them are which of the following:
 - a. Complying with roadway worker protection rules;
 - b. Ensuring that On-Track safety is being provided before fouling a Track; and,
 - c. Not fouling a Track except when necessary in the performance of duty
 - d. All of the above**



REVIEW Q & A

3. The KCS Railway Company will not assign a Roadway worker to perform the duties of a roadway worker unless that Roadway worker has received training in the on-track safety procedures for the assignment to be performed, and the Roadway worker has demonstrated the ability to fulfill the responsibilities for on-track safety that are required of a roadway worker performing that assignment:

- a. **True**
- b. False

4. An individual must not accept an assignment to perform the duties of a roadway worker until trained on KCS on-track safety procedures and qualified for the assignment to be performed:

- a. **True**
- b. False

5. Roadway workers shall not foul any track except when necessary in the performance of duty, must verify that proper on-track protection is being provided prior to fouling any track, and know the identity of the Roadway worker in charge of on-track safety:

- a. **True**
- b. False

6. Contractors will be responsible for the training of their Roadway workers in an approved KCS on-track safety rules and procedures program once per calendar year:

- a. **True**
- b. False

7. A Roadway Worker is Any Roadway worker of a railroad, or of a contractor of a railroad, whose duties include inspection, construction, maintenance or repair of railroad Track, bridge, roadway, signal, and communication systems, electric traction system, roadway facilities or Roadway Maintenance Machinery on or near Track or the potential of Fouling a Track, and Flagmen and Watchmen/Lookouts as defined in this program:

- a. **True**
- b. False



REVIEW Q & A

8. The placement of an individual or an item of equipment in such proximity to a track that the individual or equipment could be struck by a moving train or on-track equipment, or in any case is within four feet of the field side of the near running is known as:

- a. Exclusive Track Occupancy
- b. Fouling a Track**
- c. Inaccessible Track
- d. Non-Controlled track

9. The use or possession of alcoholic beverages while on duty or on company property is prohibited. Employees must not have any measurable alcohol in their breath or in their bodily fluids when reporting for duty, while on duty, or while on company property:

- a. True**
- b. False

10. Roadway workers (and contractors who are roadway workers) whose duties are subject to 49 CFR Part 214, Subpart C, "Roadway Worker Protection," must familiarize themselves with all requirements of the KCS On-Track Safety Program, including (but not limited to) the following:

- a. Roadway workers must comply with the rules and instructions provided for on-track safety
- b. All Roadway workers must ensure that they receive a job briefing
- c. Roadway workers must not perform any work that will interfere with the safe passage of trains
- d. All of the above**





MODULE ONE

PERSONAL PROTECTIVE EQUIPMENT

INSTRUCTOR: INTRODUCE TOPIC

Click "Next" at the top right to advance to the next slide.

COMPUTER INTERACTION

Click on the white space ahead of each colored box OR the play button to make the next box appear on the screen.

Click "Next" at the top right to advance to the next slide.

Personal Protective Equipment

As we go through each box, fill in the appropriate information from your class's job briefing in your student workbook.

All contractors to KCS Railroad Company must wear personal protective equipment (PPE) appropriate for duties assigned. Check with your RWIC if you have any questions or feel you need additional PPE.

The basics include:

- **Hi-visibility clothing**
- **Safety glasses**
- **Safety boots**
- **Hard hat**
- **Hearing protection**
- **Facial Coverings**



M1 PERSONAL PROTECTIVE EQUIPMENT

CLASS DISCUSSION

Before heading to work, all Roadway Workers must be equipped with the appropriate PPE.

Is our Roadway Worker on this screen prepared to work? No! Let's start by helping him get his PPE on.

As you 'dress' the Roadway Worker, review the rules listed below for each item.

INSTRUCTOR

As you 'dress' the Roadway Worker, review the rules listed below for each item.

COMPUTER INTERACTION

Click on a PPE item and drag it onto the Roadway Worker.

*In no specific order:
Drag the vest onto his chest.
Drag the glasses onto his eyes.
Drag the boots onto his feet.
Drag the hard hat onto his head.
Drag the hearing protection onto his ears.*

KCS GS-2 Clothing and Personal Protective Equipment

A. Use the approved PPE (any material or device worn to protect a person from exposure to, or contact with, any harmful substance or force) for the purpose intended. Unauthorized modifications are prohibited.

B. All PPE must fit properly and be worn according to the manufacturer's instructions.

C. Clothing

1. Wear clothing appropriate for specific duties and as appropriate to perform work safely. This and other clothing-related rules in this section are applicable at all times, including while training in a classroom setting.

2. A waist-length shirt with sleeves and ankle-length pants are required. Athletic clothing, including sweatpants and workout-type attire, shorts, halter tops, tank tops, flip-flops and sandals are prohibited.

3. Clothing must fit appropriately so as not to interfere with walking or create a risk of entanglement.



M1

PERSONAL PROTECTIVE EQUIPMENT

D. Hi-Visibility Clothing

1. All hi-visibility clothing must meet ANSI Class 2 or 3 performance standards and must have a tag indicating such. Required hi-visibility clothing must cover the torso and be worn on the outside of any other clothing. Examples of acceptable hi-visibility clothing include vests, t-shirts, and raincoats.
3. Engineering employees must wear hi-visibility clothing when working, standing, or walking within the right-of-way of road crossings or public roadways, at derailments, and during re-railing operations. Engineering employees may also be required to wear hi-visibility clothing at other times, as determined by the on-site supervisor (e.g., when working on or near special projects or construction sites where large equipment is in use).

E. Eye and Face Protection

1. Employees must wear ANSI Z-87-compliant safety glasses with side shields when on duty except when in office-type environments, parking lots, and business rail cars, or in locomotives or automobiles with all doors and windows closed.
2. Glasses should be appropriate for the environment and work being performed.
3. Glasses with mirrored lenses are prohibited.
4. When using a face shield, goggles or safety glasses must be used underneath the shield.

PERSONAL PROTECTIVE EQUIPMENT

M1

F. Footwear

1. Protective footwear that conforms to the following criteria must be worn except while working in office-type environments, in parking lots, or on business rail cars or performing other similar non-field work:



- a. Lace-up work boots laced through all loops or eyelets and securely tied.
- b. Minimum height of eight inches for men, and six inches for women.
- c. Steel or composite safety toe, which may not be exposed through the leather.
- d. Near-90° heel notch or a distinct separation between the heel and sole.
- e. Leather or leather-like uppers.

I. Head Protection

1. Red colored hard hats are prohibited.
2. Hard hats must have reflective striping visible from 360 degrees. Hard hats must be regularly inspected for defects, cracks, deep scratches, or cuts in the protective material. The inner suspension should also be inspected and replaced according to manufacturer's instructions and warnings. Defective hard hats must be replaced.



M1

PERSONAL PROTECTIVE EQUIPMENT

J. Hearing Protection

1. Hearing protection shall be used:

- a. On locomotives under load or in motion except when inside the control compartment with all doors and windows closed.
- b. Where posted.
- c. When employees have to raise their voices to clearly communicate with nearby co-workers.
- d. When performing cutting, welding or heating tasks.

M. Facial Coverings

1. Facial coverings are required (regardless of vaccination status) when:

- a. In any indoor area including any storage facility, yard office, crew room, or maintenance shop, and any railroad-controlled terminal or yard
- b. Riding with two or more occupants in any company owned or leased vehicle, contractor vehicle, vehicle rented by an employee for business purposes, or a personal vehicle used by an employee for business purposes
- c. Riding in any on-track or mechanized equipment with two or more occupants

Exceptions:

1. If a facial covering creates a risk to workplace health, safety or job duty, such as when an employee is using a face shield when welding, burning or cutting.
2. When an employee is alone in a room or office.
3. When an employee is working outside.

Employees may continue to utilize a personal facial covering, so long as it is made of cloth and covers both the mouth and nose.



MODULE ONE REVIEW Q & A

**Read these questions out loud to the class. Answer and discuss together.
ANSWERS ARE HIGHLIGHTED IN BOLD.**

1. Use the approved PPE (any material or device worn to protect a person from exposure to, or contact with, any harmful substance or force) for the purpose intended. Unauthorized modifications are prohibited:

- a. True**
- b. False

2. Which color hard hat is **not** allowed to be worn on KCS property:

- a. White
- b. Yellow
- c. Blue
- d. Red**

3. What are the five basic pieces of PPE you must have while working on or near the tracks?

Hard Hat - Safety Glasses - Hearing Protection - Hi-Viz vest - Work Boots

4. What is the minimum height that your protective footwear (boots) must be for men?

- a. 6 inches
- b. 8 inches**
- c. 4 inches
- d. 10 inches

5. You are allowed to wear glasses with mirrored lenses.

- a. True
- b. False**

6. Engineering employees must wear hi-visibility clothing when working, standing, or walking within the right-of-way of road crossings or public roadways, at derailments, and during re-railing operations. Engineering employees may also be required to wear hi-visibility clothing at other times, as determined by the on-site supervisor (e.g., when working on or near special projects or construction sites where large equipment is in use):

- a. True**
- b. False

INSTRUCTOR

Click "Next" at the top right to advance to the next slide



MODULE TWO

COMMUNICATION

INTRODUCE TOPIC

Click "Next" at the top right to advance to the next slide.

Before we begin to discuss communication requirements, it's important for you to know what qualifies as an electronic device or method of communication.

- Cell phones (Personal or Railroad Supplied)
- Radios
- Hand Signals
- Whistle Warning

We will discuss each of these items later in this module.

M2

SLIDE ONE

COMPUTER INTERACTION

Click on the white space to populate the key terms onto the screen.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

It's important to remember:

KCS Railroad has a very strict policy when it comes to cell phone and electronic device usage.

Cell phones and other electronic devices such as iPads and laptops have the potential to be an extremely dangerous distraction in the railroad operating environment.

The use of any electronic device is prohibited if that use would interfere with an employee's performance of safety-related duties.



M2 SLIDE TWO

INSTRUCTOR

This slide has no interactions and is designed for discussion.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide

M2 SLIDE THREE

INSTRUCTOR

Briefly introduce the video.

VIDEO

Click on the play button in the middle of the video to play video.

You can also click the black play button on the progress at the bottom.

If needed, you have the ability to scrub through the progress bar once the video has played through once fully.

Do not use your cell phone to make personal calls while working on KCS property.

KCS follows the rules outlined in the GCOR Manual. This is the General Code of Operating Rules (GCOR).

These rules herein govern the operations of the railroads listed and must be complied with by all employees regardless of gender whose duties are in any way affected thereby.

They supersede all previous rules and instructions inconsistent therewith.

VIDEO

This video goes into further detail about electronic devices. Below is the rule straight from the GCOR Manual and must be followed while working on KCS property.

GCOR Rule 2.21 Electronic Devices

The use of any electronic device is prohibited if such use would interfere with any employee's performance of safety-related duties. Provided that use of an electronic device would not interfere with any employee's performance of safety-related duties, this rule outlines the requirements for and prohibitions regarding such usage.

Electronic Device:

- An electronic or electrical device used to conduct oral, written, or visual communication;
- place or receive a telephone call;
- send or read an electronic mail message or text message;
- look at pictures;
- read a book or other written material;



M2

COMMUNICATION

- play a game;
- navigate the Internet;
- navigate the physical world;
- play, view, or listen to a video; play, view or listen to a television broadcast;
- play or listen to music;
- execute a computational function;
- or, perform any other function that is not necessary for the health or safety of the person and that entails the risk of distracting the employee or another employee from a safety related task.

A. Emergency Use Permitted

Personal or railroad supplied electronic devices may be used as necessary:

- To respond to an emergency situation involving the operation of the railroad,
- To respond to an emergency encountered while on duty,
- As a communication device in the event of radio malfunction.

B. Personal Electronic Devices

1. Powered Down and Stowed - Railroad operating employees on duty must have any personal electronic device turned off and stowed out of sight with any earpiece removed from the ear when:

- On moving rolling equipment or on-track equipment.
 - Any member of the crew is on the ground performing safety related duties.
- or
- Any employee is assisting in preparation of the train, engine(s) or on-track equipment.

2. Limited Use of a Personal Cell Phone - A railroad operating employee may use a personal cell phone for voice communication, text or email or to electronically reference a railroad rule, special instruction, timetable, or other directive only if:

- Rolling and on-track equipment is stopped,
- A safety briefing is conducted with all crew members to confirm that it will not interfere with any safety related or required duty,



COMMUNICATION

M2

M2 SLIDE THREE (continued)

If needed, you have the ability to scrub through the progress bar once the video has played through once fully.

- No member of crew will foul any track.

C. Railroad Supplied Electronic Devices

1. General restriction. A train and engine service employee may use a railroad-supplied electronic device only for an authorized business purpose. Specifically, the device may be used to access business-related apps, features, and documents initially loaded on the devices and subsequently pushed to the devices, by KCSR, provided that all use is consistent with the restrictions below.

2. Use by locomotive engineers operating controls.

A locomotive engineer operating the controls of a locomotive shall not use a railroad-supplied electronic device:

- a. When on a moving train, unless the device is being used to reference an operating rule, special instruction, timetable, track chart, or other directive under conditions that it is safe to do so—in the same manner in which such materials have been historically accessed in hard copy; passenger train for railroad business when it will not interfere with an employee's performance of safety related duties.
- b. When any member of the crew is -
 - i. On the ground, or
 - ii. Riding rolling equipment; or
- c. When any railroad employee is assisting in preparation of the train, locomotive(s), or on-track equipment for movement, including testing of railroad equipment or brakes.



M2

COMMUNICATION

3. Use in locomotive cabs generally. In addition to the restrictions on locomotive engineers described in paragraph 2. of this section, a railroad operating employee who is not in deadhead status shall not use a railroad-supplied electronic device in the cab of a controlling locomotive unless:

- a. A safety briefing that includes all crewmembers is held; and
- b. All crewmembers agree that it is safe to use the device.

4. Use outside locomotive cabs. A crewmember who is not in deadhead status may use a railroad-supplied electronic device outside the cab of a locomotive only if all of the following conditions are met:

- a. The crewmember is not:
 - i. Fouling a track;
 - ii. On the ground and engaged in an active switching operation; or
 - iii. Riding rolling equipment; and
- b. All crewmembers agree it is safe to use the device.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

The potential hazards associated with using electronic devices are very real. If ever on KCS property and uncertain of requirements regarding electronic devices, refer to GCOR Rule 2.21 for clarification.

M2 SLIDE FOUR

INSTRUCTOR

Introduce the video

VIDEO

Click on the play button in the middle of the video to play video. You can also click the black play button on the progress at the bottom.

Emergency Radio Calls

This video demonstrates the steps you need to take to make an emergency radio call – if the situation were to arise. You'll also notice there are more references to electronic devices and cell phone usage – it is very important that you remember and follow these rules.

Your RWIC will be equipped with a radio. While you may not be equipped with a radio, you must know what to do in case of an emergency.

Emergency calls will begin with the words "Emergency, Emergency, Emergency".

M2 **SLIDE FOUR** (continued)

If needed, you have the ability to scrub through the progress bar once the video has played through once fully.

These calls will be used to cover initial reports of hazardous conditions which could result in death or injury, damage to property or serious disruption of railroad operations such as:

- Derailments
- Collisions
- Storms
- Washouts
- Fires
- Track obstructions or
- Emergency brake applications

In addition, emergency calls must be made for the following:

- Overrunning limits of authority.
- or
- Overrunning Stop indications.

▶ Emergency calls must contain as much complete information on the incident as possible.

All employees must give absolute priority to an emergency communication. Unless they are answering or aiding the emergency call, employees must not transmit until they are certain no interference will result.

When working on or near roadway maintenance machines (also called on-track equipment, OTE) the leading and trailing machines will be equipped with radios.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.



M2

COMMUNICATION

M2

SLIDE FIVE

Discuss the following talking points below with the class:

INSTRUCTOR

Introduce pre-determined place of safety.

VIDEO

This video has **no audio** and is designed to demonstrate what a predetermined place of safety is and what to do when a train passes by.

Click on the play button in the middle of the video to play video.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

- All Maintenance of Way Roadway Workers will suspend work and move to a predetermined place of safety – 25 feet from the tracks - while being passed by a train.
- While in your place of safety, be sure to always stand facing the tracks so you can watch the train pass you by.
- As the train goes by, keep an eye out for anything that doesn't look right. If you spot something that seems off, be sure to tell your RWIC immediately.

For more information, check GCOR Rule 6.29.



M2 SLIDE SIX

INSTRUCTOR

*Introduce the topic of
Hand Signals.*

**COMPUTER
INTERACTION**

*Click the items listed on the
left side of the screen to
play an animation of
each hand signal.*

DEMONSTRATION

*Demonstrate to the class how
to give the hand signals.*

Hand Signals

Hand signals are an important and effective way for machine operators to communicate with workers on the ground. It is highly likely you'll see hand signals in use if working around roadway maintenance machines or other large machinery.

KCS follows GCOR Rule 5.3 Hand Signals

Hand signals are another common form of communication. Often, hand signals are used between workers on the ground and equipment operators.

Employees may use other hand signals only if all crew members understand the signals. When employees are not giving hand signals, they must not make any gestures or movements that may resemble a hand signal.

GCOR 5.3.2 Giving Signals

Employees who give signals must:

- Make sure signals can be plainly seen.
- Give signals clearly so they can be understood.
- Give signals on the engineer's side of the track when practical.

M2

COMMUNICATION

◀ HAND SIGNALS ▶

Stop

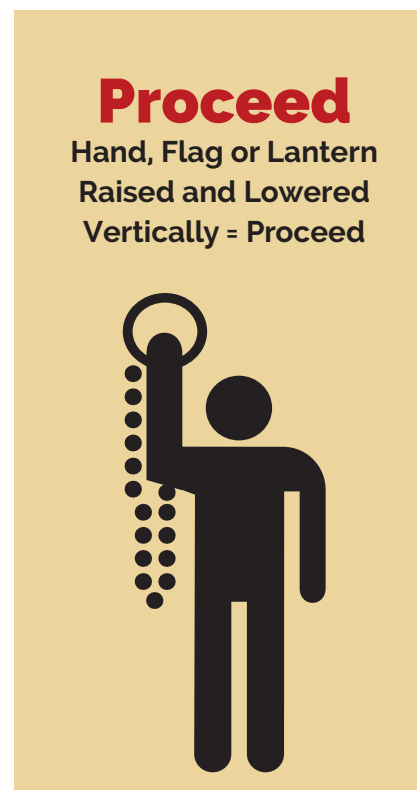
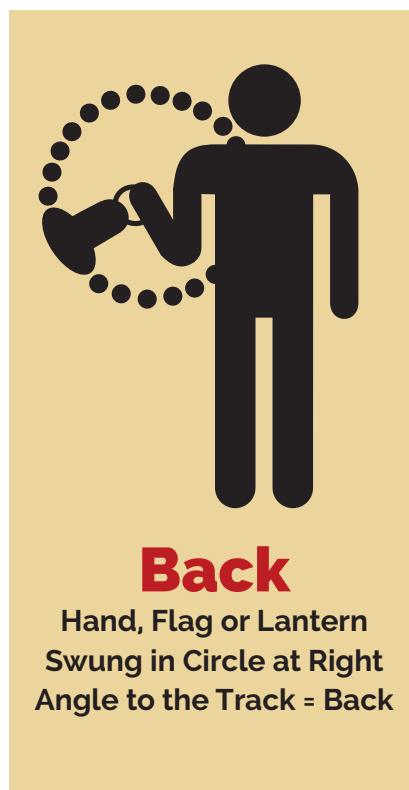
– swung horizontally at right angle to the track

Back Up

– swung vertically in a circle at right angle to the track

Proceed

– Raised and lowered vertically





MODULE TWO REVIEW Q & A

**Read these questions out loud to the class. Answer and discuss together.
ANSWERS ARE HIGHLIGHTED IN BOLD.**

1. Emergency calls will begin with the words "_____, _____, _____."
These calls will be used to cover initial reports of hazardous conditions which could result in death or injury, damage to property or serious disruption of railroad operations:
 - a. Mayday, Mayday, Mayday
 - b. Help, Help, Help
 - c. Emergency, Emergency, Emergency**
 - d. Pan, Pan, Pan

2. The use of any electronic device is prohibited if that use would interfere with an employee's performance of safety-related duties.
 - a. True**
 - b. False

3. When working on or near the track, personal electronic devices must be
 - a. Silenced and put in your pocket
 - b. Turned off and put in your pocket
 - c. Left off railroad property
 - d. Turned off and stowed out of sight**



M2

COMMUNICATION

REVIEW Q & A

4. Railroad authorized electronic devices may be used in the body of a business car or passenger train for railroad business when it will not interfere with an employee's performance of safety related duties.

- a. True**
- b. False

5. Railroad operating employees may use railroad supplied electronic devices to send or receive work related information with:

- a. Railroad supervisors and dispatchers
- b. Railroad customers and Railroad customer service employees
- c. Other railroad employees as necessary in the performance of their duties

d. All of the above

6. When clearing for a passing train, how many feet away from the tracks must you be?

- a. 25 feet**
- b. 15 feet
- c. 30 feet
- d. 20 feet

INSTRUCTOR

Click "Next" at the top right to advance to the next slide



MODULE THREE

JOB SAFETY BRIEFINGS

INTRODUCE TOPIC

Click "Next" at the top right to advance to the next slide.

M3 SLIDE ONE 21.0 JOB BRIEFINGS

INSTRUCTOR

Talk about what a Job Safety Briefing is and why it is so important.

COMPUTER INTERACTION

Click on the white space to populate the key terms onto the screen.

Job Safety Briefings

Job briefings in connection with Roadway Worker Protection are required by both KCS operating rules and FRA regulations.

All Roadway Workers must ensure they receive a job briefing before they foul any track. They must also acknowledge understanding of the on-track safety procedures and instructions given during the job briefing.

To ensure those in the work group understand the job briefing and working limits and protection, those receiving the job briefing will initial the track authority form or the maintenance-of-way Job Briefing form after the job briefing.

The job briefing for on-track safety must include information on the means by which on-track safety is to be provided and the on-track safety rules to be followed and must be conducted after a roadway worker receives their duty assignment and before fouling the track.



M3

JOB SAFETY BRIEFINGS

M3

SLIDE ONE (continued)

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

The job briefing for on-track safety must include information on the means by which on-track safety is to be provided and the on-track safety rules to be followed.

▶ **A thorough job briefing is key to a safe and successful day.**

Now, to help you prepare for your job briefings, we're going to do one here and now.

M3

SLIDE TWO

COMPUTER INTERACTION

Click on "Click to play" to activate the audio.

Listen to this **audio** and fill out your job briefing form located on page 23 of your student workbook.

Now, the **audio** will play **again**, but this time you'll see a job briefing form on the screen. Compare what you have written down to what you see. Remember that we will cover the types of on-track safety later in this program.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.



JOB SAFETY BRIEFINGS

M3

M3 SLIDE TWO / THREE

INSTRUCTOR

Set up video

Click the white play button in the middle of the video. Once the video has played completely, you will be able to scrub through as needed.

CLASS DISCUSSION

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

Ask if there are any questions about filling out a job briefing form.

RAILPROS
JOB SAFETY BRIEFING GUIDE

Critical Job Details

Roadway Worker in Charge _____ Date _____ Time _____
 Roadway Worker in Charge Phone Number _____
 Point of Contact _____ Phone Number _____
 Point of Contact _____ Phone Number _____
 Point of Contact _____ Phone Number _____
 Point of Contact _____ Phone Number _____
 Job / Task Description _____ Radio Channels _____
 Weather Conditions _____

Life Saving Processes

Location of First Aid Kit _____ CPR Qualified Person _____
 Location of Nearest Hospital _____
 Hospital Phone Number _____ (911) Nearest Crossroads _____
 Other Conditions (Special Medical Conditions, Allergies, etc.) _____

Railroad Protection Being Provided

Form of On Track Protection _____ Track Type: Controlled / Non-Controlled
 Track Number(s) _____ Authority Number _____ Time Limits _____ to _____
 Track Limits _____ to _____
 Adjacent Track(s): Y or N (if yes, provide form of Track Protection) Track Type: Controlled / Non-Controlled
 Adjacent Track Number(s) _____ Authority Number _____ Time Limits _____ to _____
 Adjacent Track Limits _____ to _____
 Are working limits in PTC Territory: Y or N (if yes, discuss any communication protocols if applicable)

Inaccessible Track

Locked Switch or Derail Yard / Industry / Other Track (name) _____
 Locked Switch or Derail Yard / Industry / Other Track (name) _____
 Locked Switch or Derail Yard / Industry / Other Track (name) _____



M3

JOB SAFETY BRIEFINGS

M3 SLIDE FOUR

INSTRUCTOR

Introduce Good Faith Challenge

Key talking points highlighted in yellow

VIDEO

Click on the white play button in the middle of the video to play.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

M3 SLIDE FIVE

INSTRUCTOR

Introduce the Lone Worker Video.

VIDEO

Click on the white play button in the middle of the video to play.

KCS On-Track Safety Rules

20.1 Roadway Worker Right to Challenge On-Track Safety Procedures

20.1.1 Right to Challenge

A KCS roadway worker has the absolute right to challenge in good faith whether the On-Track Safety procedures applied at the job location comply with the KCS Safety and Operating Rules. The roadway worker making such a good faith challenge and other members of the roadway work group may remain clear of the track until the challenge is resolved and may refuse any directive to violate an On-Track Safety rule.

20.1.2 Resolution Before Challenge

Prior to initiating a challenge, the roadway worker shall discuss the On-Track Safety procedures at the job site with the RWIC to clarify any misunderstanding about those procedures and attempt to resolve any differences of opinion concerning those procedures.

Recommended procedures for prompt and equitable resolution of Good Faith Challenges are found in RWP 20.0 through 20.2.6 of the KCS On-Track Safety Manual.

Lone Worker

There may be circumstances where you see a Roadway Worker working alone. He has been trained and qualified to do so.

As a contractor, you will never be a Lone Worker. You will always have an RWIC who will provide your protection.

A Lone Worker is an individual Roadway Worker who is not being afforded On-Track Safety by another Roadway Worker, who is not a member of a roadway work group, and who is not engaged in a common task with another Roadway Worker.

MODULE THREE REVIEW Q & A

**Read these questions out loud to the class. Answer and discuss together.
ANSWERS ARE HIGHLIGHTED IN BOLD.**

1. Before any roadway worker fouls a track the Roadway worker in charge must do which of the following:
 - a. Conduct a job briefing with each Roadway worker that includes what on-track protection is being provided and safety procedures to be followed
 - b. Inform each Roadway worker of the of the on-track protection procedures to be used and followed during the performance of the work at that time and that location
 - c. Provide information on the accessibility of the roadway worker in charge and alternative procedures in the event the roadway worker in charge is no longer accessible to the members of the roadway work group
 - d. All of the above**

2. A job briefing for on-track safety shall be deemed complete only after:
 - a. The RWIC instructs everyone to go to work
 - b. All equipment is started
 - c. Roadway workers have acknowledged understanding of the on-track protection being provided**
 - d. All of the above



M3

JOB SAFETY BRIEFINGS

REVIEW Q & A

3 All Roadway workers are responsible to see that the work plan is carried out according to the job briefing or modified when conditions change:

- a. True**
- b. False

4. When the duties of a Roadway Work Group involve fouling a track, how many Roadway Workers in Charge can be designated to provide On-Track Safety for all members of the group:

- a. One**
- b. Two
- c. One for every 10 members of the Roadway Work Group
- d. As many as the job may require as long as they have been clearly identified in the Job Briefing

5. A lone worker who fouls a track must have a job briefing with a supervisor or other designated Roadway Worker at the beginning of his tour of duty. This job briefing must include which of the following:

- a. A planned itinerary
- b. The on-track protection procedure he intends to use
- c. The Roadway worker must complete a Statement of On-Track Safety
- d. All of the above**

INSTRUCTOR

Click "Next" at the top right to advance to the next slide



MODULE FOUR

WORKING ON OR NEAR TRACKS, LOCOMOTIVES AND RAIL EQUIPMENT

INTRODUCE TOPIC

Click "Next" at the top right to advance to the next slide.

M4 SLIDE ONE

COMPUTER INTERACTION

Click on the white space to populate the key terms onto the screen.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide..

Working on Tracks has the potential to be very dangerous. It's important that your actions and behaviors are in accordance with this Roadway Worker Protection Program.

Module Overview:

- How to cross tracks
- Crossing tracks near cars, locomotives
- Slips, Trips, Falls
- Mount/Dismount



M4

WORKING ON OR NEAR TRACKS, LOCOMOTIVES & RAIL EQUIPMENT

M4 SLIDE TWO

INSTRUCTOR

Discuss in detail how to cross the tracks safely.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

M4 SLIDE THREE

COMPUTER INTERACTION

Click on the white space to the right of the video to populate the area with text.

Text highlighted in yellow is what appears on screen

VIDEO

The final click in the white space will activate the video play.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

Remember:

When working on or about tracks, be alert for and keep clear of the movement of cars, locomotives, or equipment at any time, in either direction, on any track.

Track Safety

Whether it's your first time working on or near tracks, or you've been at it for years, you must always cross the track safely.

Before crossing, stop. **Look in both directions** and then cross only if it is safe to do so.

KCS General Safety Rule 7 (GS-7) explains the appropriate way to do so.

C. Do not cross within 25 feet of the end of locomotives or rail car equipment.

Exception: Employees may cross within 25 feet of the end of equipment that they or a member of the crew are controlling without red zone protection.

D. Do not stand, sit, or walk on top of, or on the sides of, any rail car unless authorized.

E. Do not sit or lie underneath, or lean against, equipment unless duties require.

**** DO NOT STOP ON THE TRACKS**

**** ALWAYS WALK STRAIGHT ACROSS**

This video is an example of how to properly and safely cross a track.

WORKING ON OR NEAR TRACKS, LOCOMOTIVES & RAIL EQUIPMENT

M4

M4 SLIDE FOUR

INSTRUCTOR

Set up crossing
between cars

COMPUTER INTERACTION / CLASS DISCUSSION

Click the letter where
the class agrees the
Roadway Worker
can cross.

If **correct** –
a **green check** will
show up.

If **incorrect** –
a **red X** will show up
and you can prompt
the class to select a
new choice.

INSTRUCTOR

Click "Next" at the
top right to advance
to the next slide.

Crossing Tracks Between Rail Equipment

Roadway Worker Right to Challenge On-Track Safety Procedures

Your duties may require you to cross tracks between rail equipment.

KCS General Safety Rule 5 (GS-5) states

- A. Do not go between uncoupled locomotives or cars when clearance between them is less than 50 feet.

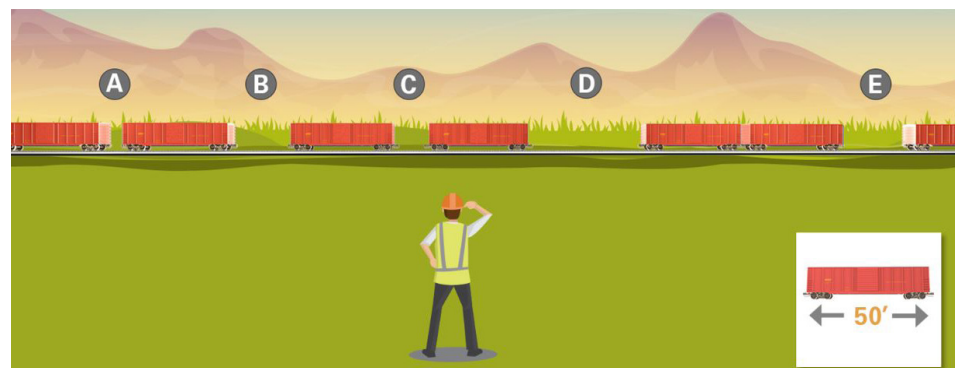
A good rule of thumb is to remember that an average box car is 50 feet. So, if it looks like a box car can fit into a space between two pieces of rail equipment, you're clear to cross! However, always be aware of your surroundings and make eye contact with machines operators before crossing in front of them.

Where it is permissible for the
Roadway Worker to cross the tracks?

A – B – C – D – E

Use the key as a guideline.

* D is the correct answer.





M4

WORKING ON OR NEAR TRACKS, LOCOMOTIVES & RAIL EQUIPMENT

M4

SLIDE FIVE / SIX

KCS General Safety Rule 7, Part C says do NOT cross within 25 feet of the end of locomotive or rail car equipment.

If the locomotive is unoccupied, you may cross further than 25 feet from the end of the equipment.

This means there is no conductor in the cab.

If the locomotive is occupied, you must make eye contact with the conductor before crossing further than 25 feet from the end of the equipment.

There is an exception to KCS General Safety Rule 7:

Employees may cross within 25 feet of the end of equipment that they or a member of the crew are controlling without red zone protection.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide..

Your RWIC will tell you whether this exception applies to you and your work group.



WORKING ON OR NEAR TRACKS, LOCOMOTIVES & RAIL EQUIPMENT

M4

M4 SLIDE SEVEN

INSTRUCTOR

Slips, Trips and Falls

Slips Trips and Falls are one of the most common workplace injuries, yet they are very easy to prevent.

Always pay attention to what you are doing and where you are going.

Constant awareness and concentration are your best defense against slip, trip and fall hazards.

KCS outlines this rule in detail in General Safety Rule 36 Avoiding Slips Trips and Falls

VIDEO

Click on the white play button in the middle of the video to play.

To avoid slips, trips or falls, employees must:

- A. Remain alert and mindful of your surroundings at all times;
- B. Use designated walkways, crosswalks, handholds and railings when available;
- C. Plan and choose routes that afford the safest walking conditions;
- D. Keep a clear view of where you are walking;
- E. Avoid carrying objects that block your view;
- F. Keep locomotive cab, vehicle and other equipment floors clear of obstructions and tripping hazards;
- G. For balance, keep hands out of pockets while walking.

You must also be attentive when getting on and off equipment. Remember these simple steps:

1. Scan the equipment to make sure it is safe to climb
2. Face the equipment and always maintain three points of contact. This means keeping a hand hold until your feet are firmly positioned and do not carry bulky items.
3. Always mount and dismount clear of adjacent tracks.
4. Before stepping off, look where you're going to place your feet.
5. Make certain that you are getting off equipment in an area that will provide solid footing and has no objects that could cause you to trip or fall.



M4

WORKING ON OR NEAR TRACKS, LOCOMOTIVES & RAIL EQUIPMENT

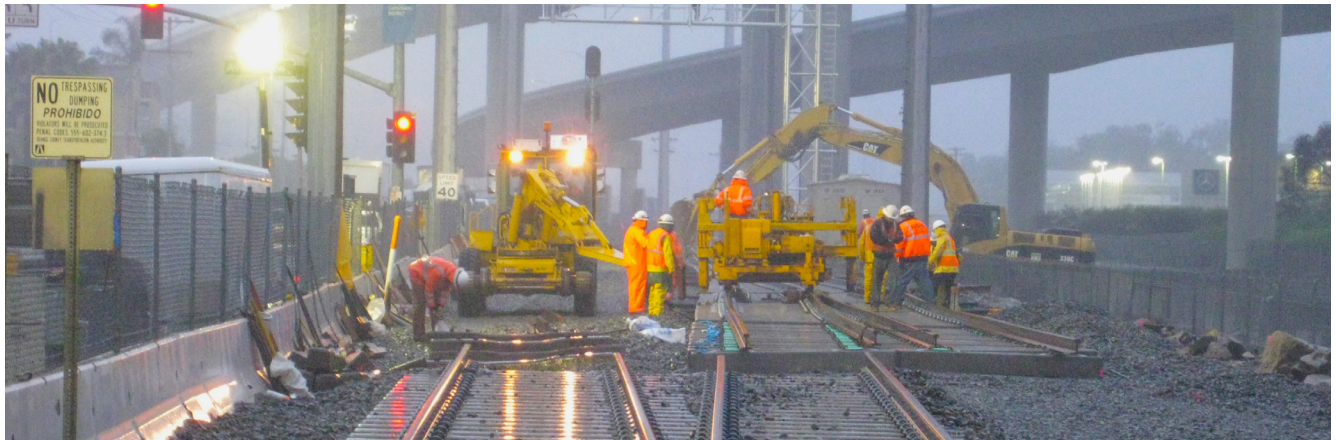
MODULE FOUR REVIEW Q & A

**Read these questions out loud to the class. Answer and discuss together.
ANSWERS ARE HIGHLIGHTED IN BOLD.**

1. Do not cross the tracks within ____feet of the end of locomotives or rail car equipment.
 - a. 30 feet
 - b. 50 feet
 - c. 45 feet
 - d. 25 feet**
2. When crossing the tracks, it is okay to step on the rail to get to the other side.
 - a. True
 - b. False**
3. When mounting and dismounting equipment, be sure to face the equipment and always maintain three points of contact.
 - a. True**
 - b. False
4. How much clearance is needed to pass between uncoupled locomotives or cars?
 - a. 25 feet
 - b. 30 feet
 - c. 50 feet**
 - d. 45 feet
5. Slip, trip and fall hazards can be avoided by always being aware of your surroundings and where you are walking.
 - a. True**
 - b. False

INSTRUCTOR

Click "Next" at the top right to advance to the next slide



MODULE FIVE

ON-TRACK SAFETY

INSTRUCTOR

Introduce topic

M5

SLIDE ONE

COMPUTER INTERACTION

Click on the white space ahead of each colored box OR the play button to make the next box appear on the screen.

TYPES OF PROTECTION/SAFETY & RULES REFERENCES

This module will discuss 7 different types of protection your RWIC may choose as your form of On-Track Safety.

These are types of Roadway Worker Protection or On-Track Safety, along with the associated GCOR or RWP Rule reference, that are typically encountered on the KCS railroad include the following:

- A Track Bulletin **Form B (Refer to GCOR 15.2 Rules)**
- Track and Time (in CTC Territory), (Refer to GCOR **10.0 CTC Rules**)
- Train Coordination (Refer to GCOR **6.3.1 Rules**)
- Individual Train Detection, or ITD, (Refer to RWP **25.1.1 Rules**)
- Track Warrant (Refer to GCOR **14.0 TWC Rules**)
- Train Approach Warning (Watchman/Lookout) (Refer to RWP **23.4 rules**)
- Inaccessible Track (Refer to RWP **23.2 Rules**)

No Matter what type of On-Track Safety you are being afforded, as a Roadway Worker, you have certain responsibilities.



M5

ON-TRACK SAFETY

M5

SLIDE ONE (continued)

INSTRUCTOR

Roadway Workers must:

- Foul track only when necessary in the performance of duty
- Verify proper On-Track Protection is provided
- Know the identity of the RWIC

Roadway Workers **may**, however, walk across any track provided that they can safely be across and clear of the track before a train or other on-track equipment would arrive at the crossing point under the following circumstances:

- Way is clear of trains or other on-track equipment
- Line of sight is not obstructed by standing cars or other equipment
- Ability to hear is not impaired by loud noises
- Roadway worker is not carrying any tools or materials that restrict motion for rapid and safe movement away from any train or on-track equipment

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.





M5

SLIDE TWO

INSTRUCTOR

Your RWIC will determine the appropriate form of protection for you and your work group.

The type of track protection required depends on the type of work being done, the type of track being worked on and the number of workers involved.

Track protection works in one of two ways: either by

1. These are the forms of protection that work to keep trains away from you
 - a. Track and Time
 - b. Form B
 - c. Track Warrant
 - d. Train Coordination
 - e. Inaccessible Track

2. These are the forms of protection that work to keep you away from trains
 - a. Individual Train Detection
 - b. Train Approach Warning

We'll start with talking about the types of protection used to keep trains away from you. This type of protection is considered Exclusive Track Occupancy. You can think of this as you have exclusive occupancy on a track and a train is not allowed to occupy a segment of a track that you are working on.



M5

ON-TRACK SAFETY

M5

SLIDE TWO (continued)

You will find 2 types of track under exclusive track occupancy: Controlled and Non-Controlled.

When in controlled track, there are two types of territories: CTC and TWC.

CTC Territory (Centralized Traffic Control - A block system that uses block signal indications to authorize train movements.)

*TWC Territory (**Track Warrant Control**)* - Track Warrant will authorize main track use under the direction of the Train Dispatcher. Track Warrant instructions must be followed where Yard Limits or Restricted Limits are in effect. See GCOR 14.0).

Your RWIC will know which territory you are working in.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide..

Your primary focus is to know what type of protection that you have and what that means to you and your fellow Roadway workers.



ON-TRACK SAFETY **M5**

M5

SLIDE THREE

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

Your RWIC will use this Matrix to help determine what type of protection is best for the work group.

For example, if you are performing planned work on controlled track in TWC Territory, you follow down and across to where they intersect and you'll see that your RWIC will choose either Track Warrant, Form B or Track and Time.

29.3 FRA Roadway Worker Protection Matrix

		Controlled Track					Non-controlled Track
Type of Work		CTC (Single Track)	TWC	BLT	Automatic Interlocking	Manual Interlocking	Other Tracks (Yard, Industry, Non-controlled sidings.
All Work Fouling Live Track		<input type="checkbox"/> Annual on-track safety training <input type="checkbox"/> Job Briefing <input type="checkbox"/> Florescent Clothing (i.e.:hard hat, vest w/reflectorized striping) <input type="checkbox"/> Locomotives ring bell and sound horn					
Movement of HI rails & Work Equipment		<input type="checkbox"/> Track & Time	<input type="checkbox"/> Track Warrant	<input type="checkbox"/> BLT Authority	<input type="checkbox"/> Key Release <input type="checkbox"/> Rule 30.2.3 <input type="checkbox"/> 30.2.10	<input type="checkbox"/> Track Authority <input type="checkbox"/> Inaccessible Track <input type="checkbox"/> Foul Time	<input type="checkbox"/> Travel authority (not working) <input type="checkbox"/> Inaccessible Track
Track Unsafe	Planned Work	<input type="checkbox"/> Track & Time <input type="checkbox"/> Form B <input type="checkbox"/> Train Coordination	<input type="checkbox"/> Track Warrant <input type="checkbox"/> Form B <input type="checkbox"/> Track & Time	<input type="checkbox"/> BLT Authority <input type="checkbox"/> Form B <input type="checkbox"/> Train Coordination	<input type="checkbox"/> MOW Release Box <input type="checkbox"/> Shunt wire <input type="checkbox"/> 30.2.10	<input type="checkbox"/> Track Authority <input type="checkbox"/> Inaccessible Track <input type="checkbox"/> Foul Time	<input type="checkbox"/> Inaccessible Track
	Unplanned Work	<input type="checkbox"/> Track & Time <input type="checkbox"/> Train Coordination	<input type="checkbox"/> Track Warrant <input type="checkbox"/> Train Coordination	<input type="checkbox"/> BLT Authority <input type="checkbox"/> Train Coordination	<input type="checkbox"/> MOW Release Box <input type="checkbox"/> Shunt wire <input type="checkbox"/> 30.2.10	<input type="checkbox"/> Track Authority <input type="checkbox"/> Inaccessible Track <input type="checkbox"/> Foul Time	<input type="checkbox"/> Inaccessible Track
Track Safe	Roadway Work Group	<input type="checkbox"/> Watchman Lookout <input type="checkbox"/> Track & Time <input type="checkbox"/> Form B <input type="checkbox"/> Train Coordination	<input type="checkbox"/> Watchman Lookout <input type="checkbox"/> Track Warrant <input type="checkbox"/> Form B <input type="checkbox"/> Train Coordination	<input type="checkbox"/> BLT Authority <input type="checkbox"/> Form B <input type="checkbox"/> Watchman Lookout <input type="checkbox"/> Train Coordination	<input type="checkbox"/> Watchman Lookout <input type="checkbox"/> MOW Release Box <input type="checkbox"/> Shunt wire <input type="checkbox"/> 30.2.10	<input type="checkbox"/> Track Authority <input type="checkbox"/> Inaccessible Track <input type="checkbox"/> Foul Time	<input type="checkbox"/> Watchman Lookout <input type="checkbox"/> Inaccessible Track
	Lone Worker	<input type="checkbox"/> ITD* <input type="checkbox"/> Track & Time <input type="checkbox"/> Train Coordination	<input type="checkbox"/> ITD <input type="checkbox"/> Track & Time <input type="checkbox"/> Train Coordination	<input type="checkbox"/> ITD <input type="checkbox"/> BLT Authority <input type="checkbox"/> Train Coordination	<input type="checkbox"/> Watchman Lookout <input type="checkbox"/> MOW Release Box <input type="checkbox"/> Shunt wire <input type="checkbox"/> 30.2.10	<input type="checkbox"/> Track Authority <input type="checkbox"/> Inaccessible Track <input type="checkbox"/> Foul Time	<input type="checkbox"/> ITD <input type="checkbox"/> Inaccessible Track

29.3 FRA Matrix Roadway Worker Protection Chart

*Except at Control Points with Dual Control Switches
 Note 1: Types of On-Track Safety are listed in priority order
 Note 2: Use of shunts, where required and permitted, as a secondary means of protection against trains and cannot be used as the sole means of providing On-Track Safety.



M5

ON-TRACK SAFETY

SLIDE FOUR

M5

INSTRUCTOR

Click "Next" at the top right to advance to the next slide..

SLIDE FIVE

M5

INSTRUCTOR

Click "Next" at the top right to advance to the next slide..

SLIDE SIX

M5

INSTRUCTOR

Click "Next" at the top right to advance to the next slide..

SLIDE SEVEN

M5

INSTRUCTOR

Click "Next" at the top right to advance to the next slide..

Before we get too far into the On-Track Safety Module, let's review some key terms you'll hear throughout.

Controlled Track – A track upon which all movements of trains must be authorized by a Train Dispatcher or Control Operator.

Non-Controlled Track – Track upon which trains are permitted by Rule or special instruction to move without receiving authorization from a Train Dispatcher or Control operator.

An easy way to remember the difference between controlled and non-controlled is:

You receive **Authority on Controlled Track**, but you receive **Permission on Non-Controlled Track**

Working Limits - A segment of track within definite limits established in accordance with this rule upon which Trains and Engines may move only as authorized by the Roadway Worker in charge having control over the Track within the Working Limits. Working Limits may be established through Exclusive Track Occupancy, Inaccessible Track or Foul Time as defined herein.

Adjacent Track – two or more tracks with track centers spaced less than 25 feet apart.

Special rules apply when being afforded adjacent track protection, and they will be discussed later in this module.

M5

SLIDE EIGHT

INSTRUCTOR

Talk about rule before playing animation

ANIMATION

Press the white play button in the middle of the animation.

The animation will play showing the passage of time, when the train pulls up, it will stop.

Click the blue "Advance Video" button in the bottom left to clear the work group from the tracks

Click the blue "Advance Video" button in the bottom left to change the signals.

Click the blue "Advance Video" button for the train to pass.

We'll start with talking about the types of protection used to keep trains away from you.

This type of protection is considered Exclusive Track Occupancy. You can think of this as you have exclusive occupancy on a track and a train is not allowed to occupy a segment of a track that you are working on.

The first form of protection covered in your KCS Contractor Training class is **Track and Time**.

Track and Time – GCOR 10.0 CTC Rules

10.3 Track and Time

The control operator may authorize a train to occupy a track or tracks within specified limits for a certain time period.

Authority must include track designation, track limits, and either a time limit or the words "until released".

The train may use the track in either direction within the specified limits according to signal indication until the limits are verbally released.

Limits designated by a switch extend only to the signal governing movement over the switch unless otherwise designated.

In other words:

Track and time means you have authority to work on or about tracks for a SET AMOUNT OF TIME within SET LIMITS. Your RWIC will communicate with the train dispatcher to get authority over the tracks. Once your RWIC does that, your working limits will be put into effect and no trains will be able to enter your working limits.



M5

ON-TRACK SAFETY

M5

SLIDE EIGHT (continued)

The trains know this because your working limits are specified by signal indication.

When the time is up, or expired, your RWIC will clear you and the other roadway workers and all equipment used in the tour of duty and then communicate with the train dispatcher to release his authority, thus allowing trains to pass through.

This animation showcases in a very simple way how Track and Time works.

Step 1: RWIC contacts the control operator and asks for authority of a set length of track (your working limits) for a set amount of time.

Step 2: The control operator changes signals to red – warning any approaching train to stop.

Step 3: You and your roadway work group go to work safely until time expires.

Step 4: When time expires, you clear the track and your RWIC will give authority of the track back to the control operator.

Step 5: Trains are allowed to pass through the area again.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

M5

SLIDE NINE

INSTRUCTOR

Talk about rule before playing animation

ANIMATION

Press the white play button in the middle of the animation.

The animation will play showing the passage of time, when the train pulls up to the red flag, it will stop.

Click the blue "Advance Video" to clear the work group from the tracks.

Click the blue "Advance Video" button and the RWIC will turn to give permission to the train that it is clear to pass through.

FORM B

Protection by Track Bulletin Form B GCOR RULES 15.2

Display track flags as specified in Rule 5.4.3 (Display of Yellow-Red Flag) and Rule 5.4.7 (Display of Red Flag).

A train must not enter the limits unless instructed by the employee in charge. A train within the limits at the time the track bulletin Form B takes effect must not make further movement until instructed by the employee in charge.

A crew member must attempt to contact the employee in charge to avoid delay, giving the train's location and track being used.

The employee in charge will use the following format to establish communication with the train:

Employee in charge of Track Bulletin No.____ (specifying line number when necessary) between MP____ and MP____ (specifying subdivision when necessary).

Trains within the limits, unless otherwise restricted, must move at the speed(s) specified by the employee in charge as stated in Item A (Instructions).

In other words:

Form B is similar to Track and Time in that you are allowed to work on a track for a specific amount of time.

Your RWIC will usually choose a Form B for protection if there is long term work to be done.

The difference is that your RWIC will act as the train



M5

ON-TRACK SAFETY

M5

SLIDE NINE (continued)

dispatcher. He has received the Track Bulletin Form B 12 hours in advance of the desired work time.

He must receive a track bulletin and verify the track bulletin number, date and time of last update, and total number of items with the train dispatcher or control operator before occupying working limits.

An RWIC will place flags to notify a train crew that the upcoming track has protection for RW/W and RMM.

Yellow-Red flags will be less than 2 miles before the restricted area. These flags warn the trains to slow down – that there will be a red flag ahead.

Red flags will be placed where the train must stop completely. This is usually just before the restricted area where you will be working.

INSTRUCTOR

You must **NOT** go outside of your working limits.

Click "Next" at the top right to advance to the next slide.

M5 SLIDE TEN

INSTRUCTOR

Talk about rule before playing animation

ANIMATION

Press the white play button in the middle of the animation.

The animation will play showing the passage of time, when the train pulls up to the mile post, it will stop.

Click the blue "Advance Video" button in the bottom left to clear the work group from the tracks.

Click the blue "Advance Video" button in the bottom left and the RWIC will turn to give permission to the train that it is clear to pass through.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

TRACK WARRANT

Track Warrant, GCOR 14.0 TWC Rules

Where designated by the timetable, a track warrant will authorize main track use under the direction of the train dispatcher or as prescribed by Rule 6.13 (Yard Limits) or Rule 6.14 (Restricted Limits). Track warrant instructions must be followed where yard limits or restricted limits are in effect.

In other words:

Track Warrant will be used in TWC territory.

An employee who requests a track warrant must inform the train dispatcher what movements will be made and, when necessary, which tracks will be used and how much time is required.

Your limits are designated by a timetable track and specific locations at each end... switches, mileposts...or some other identifiable point.

Men or equipment may receive a track warrant in the same manner as trains to occupy or perform maintenance on the main track without other protection.

A track warrant can only be held on track within track warrant limits.

So, when your RWIC is determining what kind of protection you must use, there are factors to consider. Are you CTC territory? TWC Territory? Controlled or non-controlled tracks? These are all important aspects of protection to know and be aware of, however...your RWIC will be your point of contact and he will be the one who makes the ultimate decision.



M5

ON-TRACK SAFETY

M5

SLIDE ELEVEN

INSTRUCTOR

Talk about the rule before playing the animation.

ANIMATION

Press the white play button in the middle of the animation.

The animation will play showing a train pull up next to a Roadway Work Group truck. And gives authority to the RWIC and the work group to be on the track.

Click the blue "Advance Video" button on the bottom left to make the truck move to the tracks to clear the branch and then drives off.

Click the blue "Advance Video" button in the bottom left and the RWIC will communicate with the train conductor saying it's clear to pass.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

TRAIN COORDINATION

GCOR Rule 6.3.1 Train Coordination

Train Coordination provides for men or equipment to use a train's authority to establish working limits. The employee must contact the train's engineer to request use of Train Coordination. To establish working limits:

- The train must be in view and stopped.
- The employee in charge of working limits will communicate with the engineer who will notify other crew members that working limits are to be established.
- The engineer will make movements only as permitted by the employee in charge until the working limits have been released to the engineer.
- The train will not release its authority within the limits until those working limits have been released by the employee in charge.

In other words:

Train Coordination is sometimes used in emergency situations, for example if there is something blocking the track and needs to be removed.

The RWIC will communicate directly with the engineer to establish working limits. When working limits are established, the work group may foul the track to perform their duties. When the work is complete, your RWIC will release his authority over the working limits back to the engineer.

INSTRUCTOR

*Talk about rule before
playing animation*

INACCESSIBLE TRACK

**RWP Rule 23.2 Providing Protection on Non-Controlled Track
Through the Use of Inaccessible Track**

To establish working limits on a non-controlled track:

1. Where possible, protection will be provided by **switches** being lined, locked, and tagged to prevent entrance to the track where roadway workers are performing work.
2. A **red flag or red light** will be displayed and a portable derail will be installed at least 150 feet before the nearest point of work or track obstruction (truck or machine) to protect the working limits. When using High-Speed Portable Derails in 20 MPH track(s), install the derails at least 500 feet before the nearest point of work or track obstruction. The Roadway Worker In Charge of the working limits must insure all portable derails are properly installed to the rail, secured with an MOW or private lock and tagged. The tag must have the Gang Number or RWIC name w/contact phone number.
3. Adjacent non-controlled tracks will be protected in the same manner as outlined above in items 1. Or item 2. If cars are standing on an adjacent track, and a gap exists near the work area, derails will be installed 150 feet or as near to that distance as possible to protect the work area. When using High-Speed Portable Derails in 20 MPH Adjacent track(s), install the derails at least 500 feet or as near to that distance as possible to protect work area.
4. When working on main track(s) equipped with a signal system within Yard Limits: Working limits will be provided by **obtaining Track Authority on all controlled tracks** on all sides of the yard limits to restrict access to the main track(s). On all tracks in the yard, working limits will be provided as outlined above in item 1. Or 2. making tracks Inaccessible.
Note: Lock the switch or derail in a way to prevent others from lining the switch or removing the derail. When removing protection, the most protective device should be removed first. (i.e. Derails).



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ON-TRACK SAFETY

M5

SLIDE TWELVE (continued)

INSTRUCTOR

Talk about the rule before playing the animation.

ANIMATION

Drag and drop the flags and derails to the appropriate location on the screen.

Click the switches to "throw" them. This is what the final image should look like after dragging and dropping in all the elements.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

In other words:

How would you set protection for these workers using the switches, derails and flags on this screen?

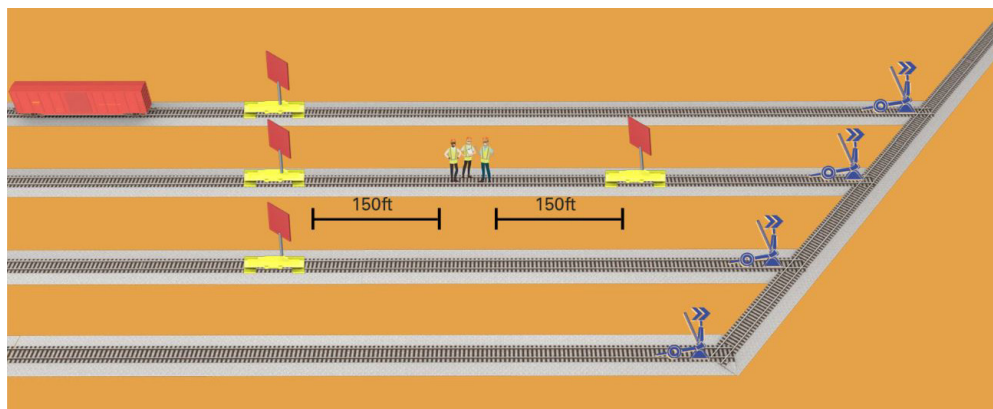
Using inaccessible tracks is a form of protection that keeps trains away from you and is a method of establishing working limits on non-controlled track. Up until this point, we were reviewing forms of protection on controlled track.

Working limits on non-controlled tracks must be established by rendering the track within the limits physically inaccessible to trains or on-track equipment.

Generally, your RWIC will use inaccessible track as a form of protection while working a yard. He will line switches away from the working limits, place derails and red flags 150 feet before he nears point of work or track obstruction. These methods will keep trains or other equipment outside your working limits from rolling towards you.

Ways to establish inaccessible track on NON-CONTROLLED TRACK:

- Switches (lined, locked, tagged)
- Red Flag or Red light



M5 SLIDE THIRTEEN

VIDEO

Click on the white play button in the middle of the video to play.



23.2.1 WEED SPRAYING AND SNOW REMOVAL EQUIPMENT

On non-controlled track, on-track roadway maintenance machines engaged in weed spraying or snow removal may proceed under the provisions of 49 CFR 214.301(c), under the following conditions:

1. Each Railroad shall establish and comply with the operating procedure for on-track snow removal and weed spray equipment to ensure that:
 - A. All on-track movements in the affected area are informed of such operations;
 - B. All on-track movements shall operate at restricted speed, except on other than yard tracks and yard switching leads, where all on-track movements shall operate prepared to stop within one-half the range of vision but not exceeding 20 miles per hour;
 - C. A means for communication between the on-track equipment and other on-track movements is provided;
 - D. Remotely controlled hump yard facility operations are not in effect and kicking of cars is prohibited unless agreed to by the Roadway Worker in Charge.
2. Roadway Workers engaged in such snow removal or weed spraying operations subject to this section shall retain an absolute right to use the provisions of CFR 214.327 (inaccessible track).

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

You should now have a good understanding of Exclusive Track Occupancy and Inaccessible Track. We will continue with On-Track Safety the procedures of Train Approach Warning and Individual Train Detection.



M5

ON-TRACK SAFETY

M5

SLIDE FOURTEEN

INSTRUCTOR

Talk about the rule before playing the animation.

TRAIN APPROACH WARNING – WATCHMAN/LOOKOUT

RWP Rule 23.4 Roadway Worker Groups May Be Protected By Watchman/Lookouts

Watchman/Lookouts

Watchman/Lookouts will provide warning to roadway/workers of approaching trains or on track equipment *outside of working limits*.

Watchman/Lookouts can be used to provide warning for independent contractors, if the contractor's requirements do not require protection under Rule 23.3 (Independent Contractors).

Watchman/Lookouts may or may not be Roadway workers of the KCS Railway Company. All Roadway workers assigned the duties of a watchman/lookout will be required to demonstrate proficiency by successfully completing an examination on the On-track Safety Rules for Train Approach Warning.

The following are some of the necessary responsibilities and requirements for Watchman/Lookouts:

1. The detection and recognition of approaching trains and on-track equipment.
 - A. Watchman/Lookout shall not be stationed in or foul another track, unless working limits have been established on that track.
 - B. Do not use a temporary speed restriction (Form A track bulletin) to determine sight distance. Only use the maximum timetable speed, including permanent speed restrictions to determine sight

distance.

2. The method of warning roadway workers of the approach of trains or equipment. Warning shall be given to enable each worker to move to a place of safety not less than 15 seconds before a train or on-track equipment passes.
3. Watchman/Lookouts shall devote full attention to detecting trains or on track equipment and shall not be assigned any other duties.
4. The means used by watchman/lookouts to communicate the approach of a train or on-track equipment shall be covered in the job briefing before fouling any track(s).
 - A. Sounding a whistle, air horn, or other audible warning device.
 - B. Clear and concise verbal communication
(Only permitted when Watchman/Lookout is in the immediate vicinity of the roadway worker(s) that are working in the foul and no other surrounding noises, including the work being performed will hinder the verbal warning.)
 - C. Touch to warn
(Only allowed when there is one roadway worker in the foul of track and the added time needed to provide the warning and be in in your place of safety 15 seconds before the arrival or a train or on-track equipment.)
5. Every roadway worker who depends on train approach warning shall maintain a position that will enable him to receive the warning.
6. Watchmen/Lookouts shall communicate train approach warning by a means that does not require warned Roadway worker to be looking in a particular direction and approaching trains or on-track equipment can be detected regardless of noise.
7. While performing his duties as a Lookout, the Watchman must



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ON-TRACK SAFETY

M5

SLIDE FOURTEEN (continued)

ANIMATION

Press the white play button in the middle of the animation.

The animation will play showing Watchman/Lookout watching for a train in both directions. When he sees one, he blows the horn.

Click the blue "Advance Video" button in the bottom left to clear the work group from the tracks.

Click the blue "Advance Video" button in the bottom left and the train will pass through without stopping.

Click the blue "Advance Video" button in the bottom left and the roadway work group will go back to work.

stay clear of the track, however taking into consideration the added time needed to provide a warning and be in your place of safety 15 seconds before the arrival of a train, a Watch/Lookout after detecting an approaching train may then foul the track to provide touch warning to one road way worker (i.e. a welder).

8. Watchman/Lookouts will not leave their assigned station or consider themselves relieved from their duties until:

A. The Roadway worker in charge has assigned another watchman/lookout to take over his duties.

Or:

B. The Roadway worker in charge has informed the watchman/lookout that the gang is in the clear and he is no longer needed as a lookout.

9. Watchmen/Lookouts shall be provided the necessary equipment to perform their duties.

10. Watchman/Lookouts must be qualified annually on the KCSR Safety Rules and On-Track Safety / Roadway Worker Protection Rules.

In other words:

Train Approach Warning – Watchman/Lookout is designed to keep you away from trains.

Train Approach Warning is when you will have a designated Watchman/Lookout.

A Watchmen/Lookout is a trained and qualified RWW who provides auditory warning for approaching trains

with at least 15 seconds advanced warning to workers before the train's arrival. This duty will be the watchman/lookouts ONLY job. His full attention is devoted to detecting trains or other On-Track Equipment.

You may NOT use power tools when this is your form of protection.

Contractors MAY be watchman/lookout; however, they must be rules qualified to perform this duty.



On the next page is the sight distance table. It is important that you are familiar with how this table works.

To use the Roadway Worker Speed, Distance and Timetable, first, determine the maximum authorized





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ON-TRACK SAFETY

▼ SIGHT DISTANCE TABLE

Max Track Speed	15 Seconds	30 Seconds	45 Seconds	60 Seconds
5 mph	110 feet	220 feet	330 feet	440 feet
10 mph	220 feet	440 feet	660 feet	880 feet
15 mph	330 feet	660 feet	990 feet	1320 feet
20 mph	440 feet	880 feet	1320 feet	1760 feet
25 mph	550 feet	1100 feet	1650 feet	2200 feet
30 mph	660 feet	1320 feet	1980 feet	2640 feet
35 mph	770 feet	1540 feet	2310 feet	3080 feet
40 mph	880 feet	1760 feet	2640 feet	3520 feet
45 mph	990 feet	1980 feet	2970 feet	3960 feet
50 mph	1100 feet	2200 feet	3300 feet	4400 feet
55 mph	1210 feet	2420 feet	3630 feet	4840 feet
60 mph	1320 feet	2640 feet	3960 feet	5280 feet
65 mph	1430 feet	2860 feet	4290 feet	5720 feet
70 mph	1540 feet	3080 feet	4620 feet	6160 feet
75 mph	1650 feet	3300 feet	4950 feet	6600 feet
80 mph	1760 feet	3520 feet	5280 feet	7040 feet
85 mph	1870 feet	3740 feet	5610 feet	7480 feet
90 mph	1980 feet	3960 feet	5940 feet	7920 feet
95 mph	2090 feet	4180 feet	6270 feet	8360 feet
100 mph	2200 feet	4400 feet	6600 feet	8800 feet
105 mph	2310 feet	4620 feet	6930 feet	9240 feet
110 mph	2420 feet	4840 feet	7260 feet	9680 feet
115 mph	2530 feet	5060 feet	7590 feet	10120 feet
120 mph	2640 feet	5280 feet	7920 feet	10560 feet
125 mph	2750 feet	5500 feet	8250 feet	11000 feet

¼ Mile = 1320 feet, ½ Mile = 2640 feet, ¾ Mile = 3960 feet, 1 Mile = 5280 feet

speed for the section of track you are working on. This can be found in the Timetable that your RWIC will have.

Then, find the row showing that speed in the speed, distance table's left column.

Estimate how long it will take you to be warned, clear the track, and move to your place of safety.

Add an additional 15 seconds to this estimated time, since 15 seconds is the MINIMUM time required to be in the place of safety prior to arrival of the train or equipment.

Now, find the time required at the top of the table columns.

Where the row and column meet indicates the sight distance required to provide train approach warning or individual train detection as your On-Track Safety.

Remember, Train Approach Warning by a watchman-lookout does not keep trains away from you, but rather relies on you to get away from trains.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide

M5

SLIDE FIFTEEN

INDIVIDUAL TRAIN DETECTION – LONE WORKER

INSTRUCTOR

Talk about the rule before playing the video.

RWP RULE 25.0 SPECIFIC ON-TRACK REQUIREMENTS FOR LONE ROADWAY WORKERS

25.1 Rules for Lone Roadway Worker

A lone worker who fouls a track must have a job briefing with a supervisor or other designated Roadway Worker at the beginning of his tour of duty. This job briefing must include:

- A planned itinerary.
- The on-track protection procedure he intends to use.
- The Roadway worker must complete a Statement of On-Track Safety.

VIDEO

Click on the white play button in the middle of the video to play.

25.1.1 Individual Train Detection may be used to establish on-track safety only:

- By a Roadway worker who is trained and qualified.
- Outside the limits of an interlocking.
- Outside the limits of a CTC controlled point with a power switch.
- Outside the limits of a remotely controlled hump yard facility.
- When performing a routine inspection or making a minor correction.
- When the lone worker is able to detect an approaching train moving at maximum authorized speed and move to a previously determined place of safety 15 seconds before it reaches the lone worker's location.
- Where no power operated tools or roadway maintenance machines are in use within the hearing of the lone worker.
- Individual train detection shall **not** be used to provide on-track safety for a lone worker using a roadway maintenance machine, equipment, or material that cannot be readily removed by hand.
- And When the ability to detect approaching trains is not impaired by:



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ON-TRACK SAFETY

M5

SLIDE FIFTEEN (continued)

- Background noise
- Lights
- Precipitation
- Fog
- Passing trains
- Other physical conditions

25.1.2 Use of ITD

A lone worker who fouls a track may use Individual Train Detection to provide his own on-track safety only where permitted in this section.

25.1.3 Right to obtain other protection

The lone worker retains the absolute right to obtain the protection described in Rule 24.1 (Protection Requirements), if deemed necessary, and remain clear of the tracks until provided.

25.2 Place of Safety

The place of safety to be occupied may not be on the track unless working limits are established on that track.

25.3 Ability to Detect Trains or On-track Equipment

The lone worker, while fouling a track, may not occupy a position or engage in any activity that would interfere with the ability to maintain a vigilant lookout for, and detect the approach of a train or on-track equipment moving in either direction.

25.4 Statement of On-Track Safety

A lone worker will fully complete the KCS Statement of On-track Safety before fouling a track when using Individual Train Detection. This statement must be produced upon request of an FRA representative or



KCS supervisor. The Statement of On-track Safety must be retained and made available for inspection for seven days.

In other words:

Lone Workers provide themselves with protection by using Individual Train Detection. They are not part of a roadway work group and have specialized training to be rules and GCOR qualified.

INSTRUCTOR

Review the rule again in basic terms

Click "Next" at the top right to advance to the next slide.

As a contractor to KCS Railroad, you will never be a Lone Worker, however you should be familiar with such form of protection.



M5

ON-TRACK SAFETY

M5

SLIDE SIXTEEN

INSTRUCTOR

Talk about the rule before playing the animation.

ANIMATION

Press the white play button in the middle of the animation.

The animation will play showing a Roadway Work group working on adjacent tracks.

The green extends to show working limits on both tracks, but then pulls back to just one track.

Click the blue "Advance Video" button in the bottom left to clear the work group from the tracks, to show that the working limits have been limited to just one track, and all Roadway Maintenance machines have stopped.

Click the blue "Advance Video" button in the bottom left and the train will pass through without stopping.

ADJACENT TRACK PROTECTION

24.2 Adjacent Track Protection on Controlled and Non-Controlled Track(s)

- A. A roadway worker group engaged in large-scale maintenance or construction, such as rail, tie, and surfacing gangs, shall be provided protection on adjacent tracks that are less than 25 feet from the track on which they are working.
- B. Adjacent track protection is required when using any type of roadway maintenance machine equipped with moving parts, such as cranes, booms, ballast plows, tampers, backhoe, track hoe, or other equipment that has potential to foul adjacent track(s).

Exception:

Adjacent Track Protection is not required when:

- Hi-rail vehicles, including rail test vehicles are used for inspection purposes only.
- Making minor track repairs using hand-tools only, OR the repairs can be accomplished from the opposite side, away from any live tracks.
- Mechanics making repairs to equipment and the repairs can be made on the opposite side, away from any live tracks, OR the standing equipment physically limits roadway workers from fouling any unprotected adjacent track(s).

- An inter-track physical barrier is in place that would prevent on-ground roadway workers from walking in the foul of any live adjacent track(s).

In other words:

As a reminder, adjacent tracks are two or more tracks with track centers spaced less than 25 feet apart.

INSTRUCTOR

*Review the rule again in
basic terms*

If you are working next to an adjacent track, and there is potential for you to foul the adjacent track with people or equipment, you are required to have protection on the adjacent track.

Your RWIC will be aware of situations like this and provide protection for the track you are working on as well as the adjacent track.

Usually, the protection on the adjacent track will be a Watchman/Lookout.

If a train is detected on the adjacent track to the one you are working on, you must stop working, stop any and all on-track equipment, and move to your place of safety on the far side of the track (opposite to the one you are working on) and wait for the train to pass before it is safe to resume work.



M5

ON-TRACK SAFETY

MODULE FIVE REVIEW Q & A

**Read these questions out loud to the class. Answer and discuss together.
ANSWERS ARE HIGHLIGHTED IN BOLD.**

1. Fill in the blanks with appropriate forms of protection that:
 - a. Keep Trains away from you:
 - i. Track and time**
 - ii. Form B**
 - iii. Track Warrant**
 - iv. Train Coordination**
 - v. Inaccessible Track**
 - b. Keep you away from trains:
 - i. Individual Train Detection**
 - ii. Train Approach Warning**

2. A track upon which all movements of trains must be authorized by a Train Dispatcher or Control Operator.
 - a. Non-controlled Track
 - b. Adjacent Track
 - c. Controlled Track**

3. Roadway workers shall not foul any track except when necessary in the performance of duty, must verify that proper on-track protection is being provided prior to fouling any track, and know the identity of the Roadway worker in charge of on-track safety:
 - a. True**
 - b. False

REVIEW Q & A

4. Track and time means you have permission to work on or about tracks for a set amount of **TIME** within set **LIMITS**.
5. Form B protection requires the use of _____ to set working limits.
 - a. Signals
 - b. Mile Posts
 - c. Flags**
 - d. Men
6. Working limits may be established on both controlled track and non-controlled track:
 - a. True**
 - b. False
7. The type of track protection to be used depends on which of the following:
 - a. The type of work being done
 - b. The type of track being worked on
 - c. The number of workers involved
 - d. All of the above.**
8. Working limits may be established on _____ tracks by use of the provisions of Inaccessible Track:
 - a. Non-Controlled**
 - b. Controlled
 - c. Yard
 - d. Main
9. Track warrant limits must be designated by specifying track, where required, and specific locations such as switches, mile posts, or railroad identifiable points:
 - a. True**
 - b. False



M5

ON-TRACK SAFETY

REVIEW Q & A

10. Warning by a Watchman/Lookout shall be given to enable each worker to move to a place of safety not less than ____ seconds before a train or on-track equipment passes:
 - a. 60
 - b. 45
 - c. 30
 - d. 15**

11. The means used by watchman/lookouts to communicate the approach of a train or on-track equipment shall be covered in the job briefing before fouling any track(s) and shall consist of:
 - a. Sounding a whistle, air horn, or other audible warning device.
 - b. Clear and concise verbal communication (Only permitted when Watchman/Lookout is in the immediate vicinity of the roadway worker(s) that are working in the foul and no other surrounding noises, including the work being performed will hinder the verbal warning.)
 - c. Touch to warn (Only allowed when there is one roadway worker in the foul of track and the added time needed to provide the warning and be in in your place of safety 15 seconds before the arrival of a train or on-track equipment.)
 - d. All of the above**

12. A Lone Worker who chooses to use individual train detection to establish on-track safety shall first complete a written Statement of On-Track Safety and shall have additional training to qualify him to do so.
 - a. True**
 - b. False

INSTRUCTOR

Click "Next" at the top right to advance to the next slide



MODULE SIX

ROADWAY MAINTENANCE MACHINES

INSTRUCTOR

Introduce Topic

KCS Railroad requires all roadway workers operating machinery to complete and pass a separate annual roadway maintenance machine training course. This course is separate from the On-Track Safety RWP course you are currently attending. Consult your me or employer if you need to take this course.

M6 SLIDE ONE

VIDEO

Click on the play button in the middle of the video to play video.

Click "Next" at the top right to advance to the next slide.

Roadway Maintenance Machine (RMM)

Sometimes referred to as On-Track Equipment (OTE), this is a device powered by any means of energy other than hand power which is being used on or near railroad track for maintenance, repair, construction or inspection of track, bridges, roadway, signal, communications, or electric traction systems. Roadway Maintenance Machines may have road or rail wheels or may be stationary.

M6 SLIDE TWO

Roadway Maintenance Machines – Introduction

Whether you are operating roadway maintenance equipment or working around it, you must be familiar



M6

ROADWAY MAINTENANCE MACHINES

INSTRUCTOR

Click "Next" at the top right to advance to the next slide

M6 SLIDE THREE

INSTRUCTOR

Introduce video

VIDEO

Click on the play button in the middle of the video to play.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

with and comply with all rules that govern on track equipment. These rules are critical to your safety, and the safety of those around you.

Inspection

Those operating roadway maintenance machinery or hi-rail vehicles must inspect their equipment before use.

As a contractor, you will not have to do this, but it is important to be aware of what machines are inspected for.

If you see something that doesn't feel right, be sure to tell your RWIC and machine operator immediately.



ROADWAY MAINTENANCE MACHINES

M6

M6 SLIDE FOUR

INSTRUCTOR

Introduce video

VIDEO

Click on the play button in the middle of the video to play.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

Safety Regulations

While you may not operate a roadway maintenance machine, you will need to be aware of the required safety equipment.

Per FRA (Federal Railroad Administration) regulations, the required safety equipment for on-track equipment must include:

- A safe operator's seat
- Safe and secure handholds, handrails and passenger seating where required
- A permanent illumination device or a portable light that is securely placed and not handheld;
- An effective and working brake light system or reflective device designed to be visible from 300 feet
- An operative, roof-mounted, 360-degree warning light or beacon
- A change-of-direction alarm and rearview mirror or other rear viewing device
- A readily accessible first aid kit and fire extinguisher securely mounted and readily available to the operator from his workstation
- A turntable restraint device if the machine is equipped with turntables; or a warning light indicating that the turntable is not in the normal travel position
- An operative heater, when the machine is operated at an ambient temperature less than 50 degrees Fahrenheit

M6

ROADWAY MAINTENANCE MACHINES

M6 SLIDE FIVE

VIDEO

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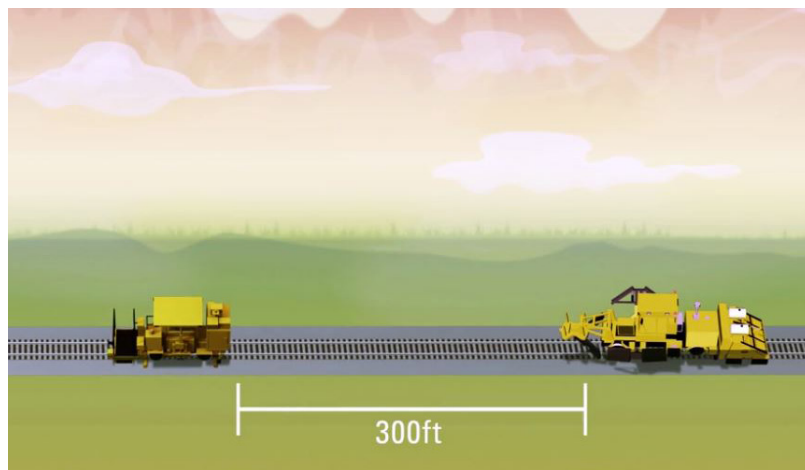
The video has no sound and shows Roadway Maintenance Machines travelling space.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

Spacing While Traveling

Roadway machines must keep at least three hundred feet apart while traveling to or from a work location.



M6 SLIDE SIX

VIDEO

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The video has no sound.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

Maximum Traveling Speed

The speed at which Roadway Maintenance Machines varies with conditions but is determined by the table in Rule 30.2.6 in the Maintenance of Way and Signal Department Rules.

Machine operators will be made aware of these rules in the additional Roadway Maintenance Machine Training course.

ROADWAY MAINTENANCE MACHINES

M6

M6 SLIDE SEVEN

Braking

Always be familiar with the roadway maintenance machine that you are working on or around.

INSTRUCTOR

Introduce video

VIDEO

Click on the play button in the middle of the video to play.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

On-track equipment operators are responsible for maintaining a safe braking distance between trains and other on-track equipment. When operating on-track equipment behind a **moving train or engine**, never get within 1000 feet of the train. And never get so close that you cannot effectively stop in time to avoid a collision.

On-track equipment must not approach a stationary train or engine nearer than 150 feet except when necessary to clear. If such a move is required, a job briefing must be conducted, and all involved must have a clear understanding of the movement to be made.

You can read more about this rule, Rule 30.5.3, in the Maintenance of Way and Signal Department Rules.





M6

ROADWAY MAINTENANCE MACHINES

M6 SLIDE EIGHT

INSTRUCTOR

Introduce video

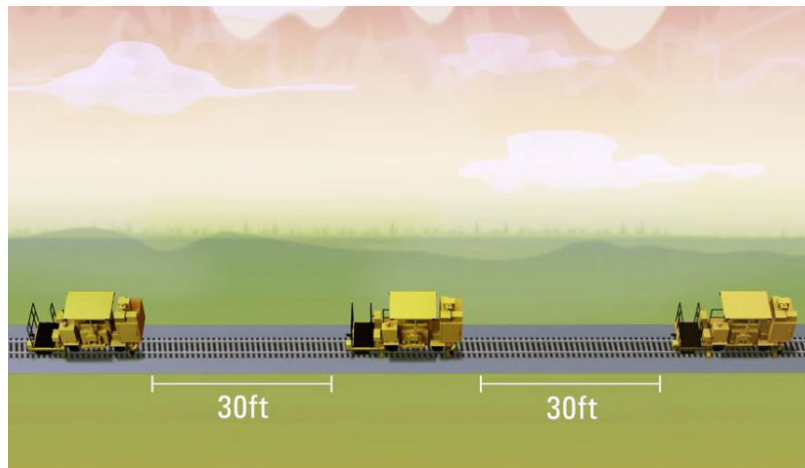
VIDEO

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to play animation.*

The video has no sound.

Spacing While Working

Unless a different distance is specified in the Job Briefing, the minimum distance between machines while working is 30 feet. If operating less than 30 feet between machines, the operators must communicate and have a clear understanding before moving machines



INSTRUCTOR

*Click "Next" at the top
right to advance to the
next slide.*

Remember: You CAN work between Roadway Maintenance Machines as long as you have a detailed job briefing with your RWIC and the RMM operator.

ROADWAY MAINTENANCE MACHINES

M6

M6 SLIDE NINE

Fouling Adjacent Tracks

INSTRUCTOR

Introduce video

You can find this rule in RWP Rule 26.1.1.

Roadway equipment must not foul adjacent tracks unless working limits are established on the adjacent tracks.

When roadway maintenance machines must pass a train on an adjacent track, all work must stop and all extendable equipment on the machine must be in its fully retracted position to provide maximum clearance from the passing train.

VIDEO

Click on the play button in the middle of the video to play.

When being passed by a train on an adjacent track: Stop and engage all safety locks and pins. After securing the machine, dismount away from live track, if safe to do so, and occupy a place of safety to inspect the passing train.

INSTRUCTOR

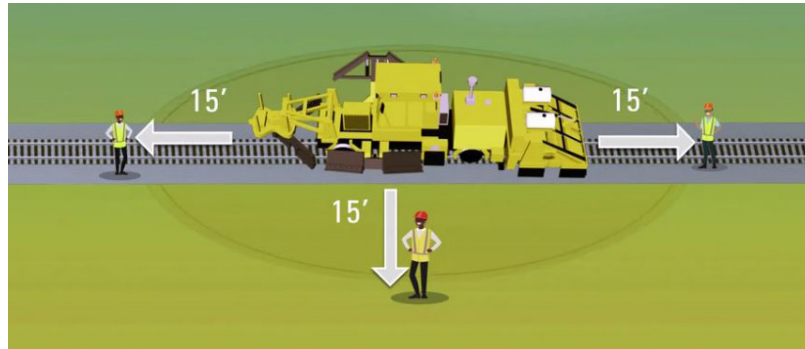
Click "Next" at the top right to advance to the next slide.

Exception: Operators of car top material handlers may remain in the machine while trains are passing on an adjacent main track or controlled siding; however, they will: stop their equipment and engage all safety locks and pins, and not move the machine while trains are passing.

M6

ROADWAY MAINTENANCE MACHINES

M6 SLIDE TEN



VIDEO

Click on the play button in the middle of the video to play animation.

The video has no sound.

INSTRUCTOR

Click "Next" at the top right to advance to the next slide.

6 SLIDE ELEVEN

VIDEO

Click on the play button in the middle of the video to play animation.

Safe Zone

Each RMM has a safe zone. This is the safe working area for each machine.

Roadway Workers must not enter the safe zone of a machine.

The safe zone is the area 15 feet to either side of the machines center line and 15 feet beyond each end of the machine.

As a Roadway Worker working around moving equipment and machines, stay aware of all work equipment in your area.

Equipment operators do have the responsibility for the safe operation of the equipment. However, as a ground crew, you must also assume responsibility to stay clear of the equipment's work area.

If your duties require you to enter the safe zone of a machine, you must have a detailed job briefing with the machine operator.

Radios

The leading OTE and the trailing OTE will be equipped with radios.

REMEMBER: Railroad-supplied must not be used by the on-track equipment operator unless the movement is stopped.

MODULE SIX REVIEW Q & A

Read these questions out loud to the class. Answer and discuss together.

ANSWERS ARE HIGHLIGHTED IN BOLD.

1. Spacing between Roadway Machines to prevent collisions must be a minimum of _____ feet between maintenance machines standing or working:
 - a. 75
 - b. 50
 - c. 30**
 - d. 100
2. Roadway workers who must work in the vicinity of roadway maintenance machines, and the operators of roadway maintenance machines, will maintain a _____ foot safe area around the machine:
 - a. 10
 - b. 15**
 - c. 25
 - d. 50
3. The leading and trailing Roadway Maintenance Machines will be the only machines equipped with a radio.
 - a. True**
 - b. False
4. You must take an additional training course to become qualified to operate Roadway Maintenance Machines.
 - a. True**
 - b. False
5. Each new on-track roadway maintenance machine shall be equipped with a horn or other audible warning device that produces a sound loud enough to be heard by roadway workers and other machine operators within the immediate work area. The triggering mechanism for the device shall be clearly identifiable and within easy reach of the machine operator:
 - a. True**
 - b. False

INSTRUCTOR

Click "Next" at the top right to advance to the next slide



MODULE SEVEN

POSITIVE TRAIN CONTROL

INSTRUCTOR

Introduce Topic

M6 SLIDE ONE

VIDEO

Click on the play button in the middle of the video to play video.

Click "Next" at the top right to advance to the next slide.

49 CFR 236.1049 requires that Roadway Workers receive training on Positive Train Control, or PTC. Instruction must ensure roadway workers understand the role certain equipment play in the function of the PTC system and in establishing protection for Roadway Workers and their equipment; and training must ensure roadway workers recognize potential PTC equipment and how to avoid interference the PTC system. This module will cover what PTC is, how and why it works, how roadway workers may impact the system and how the system impacts roadway workers.

Positive Train Control Machine (PTC)

Positive Train Control (PTC) is a state-of-the-art collision avoidance system for trains. It is designed to provide warning to engineers and automatically stop a train before certain accidents occur.

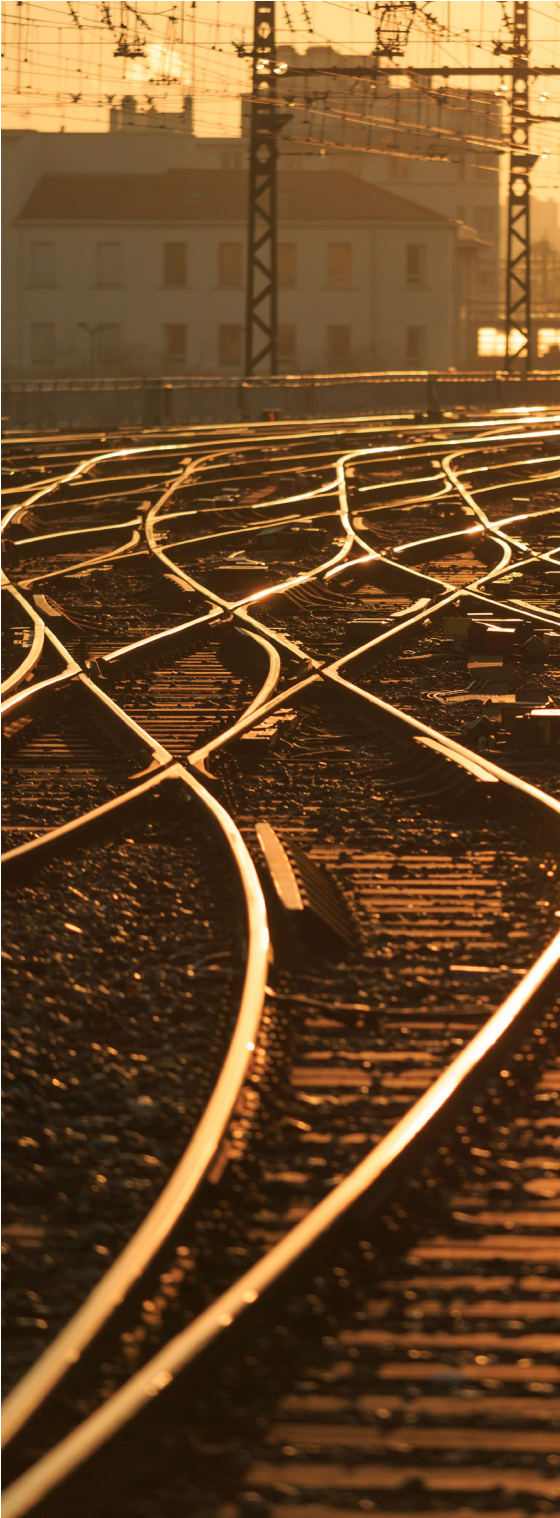
MODULE SEVEN REVIEW Q & A

1. What does PTC Stand for?
 - a. Position-Train-Cars
 - b. Positive-Train-Control**
 - c. Private-Track-Car
 - d. Product-Technical-Career

2. What is PTC designed to prevent?
 - a. Train-to-train collisions
 - b. Derailments caused by excessive train speed
 - c. Train movements through misaligned switches, and unauthorized train entry into work zones
 - d. All of the above**

3. What are some Wayside Assets that are typically part of the PTC network?
 - a. Switches
 - b. Mileposts
 - c. Grade crossings
 - d. All of the above**

4. How does PTC help to protect Roadway Workers?
 - a. Reroutes the train a different direction.
 - b. Speeds the train up so Roadway Workers do not get delayed working.
 - c. Accounts for working limits and provides warning to an engineer as the train approaches**
 - d. Allows the conductor and engineer time to nap in route to their final destination.



Safety

OUR HIGHEST PRIORITY

KCS has a commitment to safety. It is our highest priority. Working safely is essential to the welfare of our workers, their families and co-workers.

Following the safety and operating rules discussed today will ensure a successful and safe completion of your on-track worker duties. Safe workers are the foundation of safe railroading.

INSTRUCTOR:

Wrap up

VIDEO

Click on the play button in the middle of the video to play video.

CLASS DISCUSSION

Take time to answer questions, comments, etc.



Final Exam Administration

■ Passing Score

A passing score for this test is 85%. Review all questions answered incorrectly with students. Follow the review, check their understanding by asking similar questions to the ones they answered incorrectly. If they demonstrate understanding, they may receive a passing score for that question.

■ After Test

After the examination has been completed (including scoring and review), collect the Examination booklet and Answer Sheets from the students. Send the Sign-in sheet and all test materials back to the RailPros offices in Jacksonville, Florida.

*RailPros
8381 Dix Ellis Trail, Suite 120
Jacksonville, FL 32256*

■ Certification Cards

Issue certification cards to students who successfully completed training by earning a passing score. Email all headshot pictures to; Susan.Dunshee@railpros.com.

■ Record Keeping

Record the scores on the sign in sheet. Independent contractors and employers who provide services of roadway workers must maintain written or electronic records documenting roadway worker qualification.

According to FRA, each record must include:

- Name of the employee
- Type of qualification (KCS Roadway Worker Protection Program)
- Most recent date of qualification

These records are subject to inspection and photocopying by the FRA during regular business hours. Records must be maintained for two years. These records are subject to FRA audit.

Instructions

- Distribute the Examination booklet and Answer sheet.
- Allow the students 30 minutes to complete the final examination and 10-15 minutes for scoring and review.
- Instruct students to legibly print their name on the Answer Sheet.
- Instruct students to indicate their answer choice on the Answer sheet ONLY by marking an X through the letter corresponding to their choice.
- Students must NOT write or mark in the examination booklet.
- Each student must complete the Final Examination individually.



FINAL EXAM

ANSWERS IN BOLD

1. Each roadway worker has specific responsibilities on the KCS. Among them are which of the following:

- a. Complying with roadway worker protection rules;
- b. Ensuring that On-Track safety is being provided before fouling a Track; and,
- c. Not fouling a Track except when necessary in the performance of duty

d. All of the above

2. The placement of an individual or an item of equipment in such proximity to a track that the individual or equipment could be struck by a moving train or on-track equipment, or in any case is within four feet of the field side of the near running is known as:

- a. Exclusive Track Occupancy
- b. Fouling a Track**
- c. Inaccessible Track
- d. Non-Controlled track

3. Use the approved PPE (any material or device worn to protect a person from exposure to, or contact with, any harmful substance or force) for the purpose intended. Unauthorized modifications are prohibited:

- a. True**
- b. False



FINAL EXAM

ANSWERS IN BOLD

4. Roadway workers (and contractors who are roadway workers) whose duties are subject to 49 CFR Part 214, Subpart C, "Roadway Worker Protection," must familiarize themselves with all requirements of the KCS On-Track Safety Program, including (but not limited to) the following:
- a. Roadway workers must comply with the rules and instructions provided for on-track safety
 - b. All Roadway workers must ensure that they receive a job briefing
 - c. Roadway workers must not perform any work that will interfere with the safe passage of trains
 - d. All of the above**
5. Working limits may be established on _____ tracks by use of the provisions of Inaccessible Track:
- a. Non-Controlled**
 - b. Controlled
 - c. Yard
 - d. Main
6. A Watchmen/Lookout may be assigned other job-related duties while functioning as a watchman:
- a. True
 - b. False**
7. A job briefing for On-Track Safety shall be deemed complete only after:
- a. The RWIC instructs everyone to go to work
 - b. All equipment is started
 - c. Roadway workers have acknowledged understanding of the on track protection being provided**
 - d. All of the above



FINAL EXAM

ANSWERS IN BOLD

8. The use of any electronic device is prohibited if that use would interfere with an employee's performance of safety-related duties.
- a. True**
 - b. False
9. Form B protection requires the use of _____ to set working limits.
- a. Signals
 - b. Mile Posts
 - c. Flags**
 - d. Men
10. Roadway workers who must work in the vicinity of roadway maintenance machines, and the operators of roadway maintenance machines, will maintain a ____foot safe area around the machine:
- a. 10
 - b. 15**
 - c. 25
 - d. 50
11. A track upon which all movements of trains must be authorized by a Train Dispatcher or Control Operator.
- a. Non-controlled Track
 - b. Adjacent Track
 - c. Controlled Track**
12. How much clearance is needed to pass between uncoupled locomotives or cars?
- a. 25 feet
 - b. 30 feet
 - c. 50 feet**
 - d. 45 feet



FINAL EXAM

ANSWERS IN BOLD

13. When mounting and dismounting equipment, be sure to face the equipment and always maintain three points of contact.
- a. **True**
 - b. False
14. When the duties of a Roadway Work Group involve fouling a track, how many Roadway Workers in Charge can be designated to provide On-Track Safety for all members of the group:
- a. **One**
 - b. Two
 - c. One for every 10 members of the Roadway Work Group
 - d. As many as the job may require as long as they have been clearly identified in the Job Briefing
15. Track warrant limits must be designated by specifying track, where required, and specific locations such as switches, mile posts, or railroad identifiable points:
- a. **True**
 - b. False
16. The type of track protection to be used depends on which of the following:
- a. The type of work being done
 - b. The type of track being worked on
 - c. The number of workers involved
 - d. **All of the above**



FINAL EXAM

ANSWERS IN BOLD

17. A state of freedom from the danger of being struck by a moving train or other railroad equipment, provided by operating and safety rules that govern track occupancy by personnel, trains and on-track equipment is known as:

- a. Controlled Track
- b. Red Zone Protection
- c. On-Track Safety Protection**
- d. Dispatcher Authority

18. An individual must not accept an assignment to perform the duties of a Roadway Worker until trained on KCS in On-Track Safety procedures and qualified for the assignment to be performed:

- a. True**
- b. False

19. Warning by a Watchman/Lookout shall be given to enable each worker to move to a place of safety not less than ____ seconds before a train or on-track equipment passes:

- a. 60
- b. 45
- c. 30
- d. 15**

20. Which color hard hat is not allowed to be worn on KCS property:

- a. White
- b. Yellow
- c. Blue
- d. Red**



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904-296-8088

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